DH Department of Health

The Family-Nurse Partnership Programme in England:

Wave 1 implementation in toddlerhood & a comparison between

Waves 1 and 2a of implementation in pregnancy and infancy

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Key Messages

- The FNP programme in its entirety can be delivered successfully in England within the context of the NHS in terms of the number of visits made, the content of visits and the extent to which clients remain involved in the programme until their infants are 24 months old.

- Delivery of the programme was relatively unaffected by the characteristics of clients at intake in terms of their vulnerability to poor child or parent outcomes, except that in pregnancy clients with the highest level of vulnerability (5 or more of 8 indicators) and those with no identified vulnerabilities were among the best supported by visits.

- Attrition in toddlerhood at 7% was much lower than it had been in pregnancy or infancy, as predicted by the USA stretch objective, which specifies a desirable upper limit for toddlerhood of 10%. However 3% of active clients had not been visited since their child was 12 months old so were in effect also leavers. Attrition was relatively unaffected by the demographic characteristics of the clients.

- Many possible outcomes of the programme can be identified. For most of these there are no comparable data but overall it appears that clients are making good use of birth control, using reliable forms of control such as the birth control pill or implants, and most are spacing second pregnancies and births in a similar manner to participants in US trials of the programme.

- Educational qualifications have been gained since the time the clients became pregnant, representing all age groups and not only those who were not of school leaving age at intake. Some clients who had not previously been employed have been in paid employment since the birth of their child and on average clients have worked for 9 months since the birth of their child.

- Graduation for some clients extended well beyond their child's second birthday. This was due in part to the close relationships that had developed but was also related to perceived concerns about the level of support that would be available from other services such as health visiting and Sure Start Children's Centres.

- Graduates interviewed soon after completing FNP were positive about their parenting capacity. They reported a high level of warmth and a low level of harsh discipline. At intake just under one third (47/145, 32%) reported having low mastery, i.e. lacking the capacity to take control of their lives. Fewer than half that number reported low mastery after graduation (15%, 22/150) representing a significant reduction for those with information at both time points. Few graduates (13/154, 8%) reported their children having marked emotional or behavioural problems. More child behaviour problems were associated with more parental stress, less warmth and a lower level of mastery. Almost half (69/155, 45%) programme graduates interviewed had visited a children's centre since completing FNP, mainly for mother and toddler play sessions or child care.

- Wave 2a sites appear to have gained from the experiences of the Wave 1 sites. They are delivering a greater percentage of expected visits and attrition is substantially lower. The client group is slightly different; fewer clients have no risk factors for poor child outcomes or

many (5 or more) at intake. The Wave 2a sites are making more use of children's centres for visits.

Executive summary

This third report follows the first cohort of 1303 FNP clients in the 10 Wave 1 sites in England through to the end of the toddlerhood phase, from 12 to 24 months, focussing in particular on clients whose child had, or would on the basis of their expected due date at intake have reached 24 months at the time the data were extracted for analysis (mid-July 2010, N=1177). It should be noted that this group included 18 foetal deaths, three stillbirths and four child deaths. Of the 1177, 690 remained enrolled throughout the entire programme period, from early pregnancy to 24 months, so the most detailed information on programme delivery and client progress is available for those clients.

In this phase the evaluation had four main aims; to determine:

- Whether FNP is being implemented with fidelity in England during the final toddlerhood phase?
- Whether FNP is acceptable in its entirety up to the time that children are 24 months of age – to young mothers, their partners and to Family Nurses?
- The nature of the experience of completing the programme for clients and for Family Nurses.
- Whether it is likely that FNP will benefit the women, children and families in receipt of FNP?

Information comes from the standardised data forms completed by Family Nurses (FNs) in the delivery of FNP; from in-depth interviews with all the FNs who have worked on the programme since its introduction; in-depth investigation of four FNP teams; detailed work diaries completed by FNs over a two week period; interviews with toddlerhood leavers; and detailed telephone interviews with a 22% sample of programme graduates.

Programme Delivery

Delivery of the programme in toddlerhood is close to the level set out in the stretch objective for the expected number of visits The objective to aim for is 60% of the 22 toddlerhood visits and the average across the 10 sites (55%) was close, even closer for those clients identified as active throughout the entire programme (58%). As was the case in pregnancy and infancy, there was substantial variability in toddlerhood delivery between sites. In two areas the mean percentage of visits to clients was above the 60% level and in three it was below 50% with the remainder in between. In some sites clients continued to be visited for up to six months after the client should have graduated from the programme (at 24 months).

Eight intake vulnerability characteristics were identified that have, in previous research studies, been associated with poor child development outcomes. The relationship between the expected number of visits received in pregnancy and client vulnerability was U-shaped. Those with no intake vulnerabilities and those with 5 to 7 received the greatest proportion of expected visits while those with between 1 and 4 generally received a smaller proportion of their expected visits. This pattern was less evident in infancy and not evident at all in toddlerhood.

In previous phases all sites had average visit lengths beyond the stretch objective of 60 minutes. In toddlerhood for the first time one site has a mean below 60 minutes, with a wide range between sites, from 57 minutes up to 84. The shorter visits may reflect the busier lives of the mother with toddlers, their involvement in employment or studies, or that they were becoming more independent and needed less support. Shorter visits may also reflect the challenge of keeping the mother engaged with a busy toddler in the room.

In toddlerhood the content of the visits is designed to shift away from the mother's health to her life course. The stretch objective for this domain in toddlerhood is that 18 to 20% of the time in visits should cover the life course but the average time overall was 13%, with no site's average reaching 18%. In contrast in all but one site the average time per visit spent on the mother's personal health was above the 10-15% stretch objective with an overall average of 18%.

Father involvement remained steady. Partners were present in total for 2067 of 10870 all toddlerhood visits (19%), slightly lower than the percentages for previous phases (22% and 24%). There was at least one visit with the father present for 56% of the clients. Client and partner involvement in the programme and understanding of the content were rated highly as they had been in previous phases, and a similar very low level of conflict with the materials was noted. Site differences reveal that some sites, presumably keeping the strength-based approach in mind, rate almost all clients at the maximum level of understanding and involvement.

There is some evidence that more visits in toddlerhood than in previous phases took place in children's centres, particularly when the FNP team were based in a centre. This suggests that, while FNP is a home-visiting service, as their children got older and the mothers gained in confidence, they were being encouraged by the FNs to explore other services.

Attrition

Attrition in toddlerhood was generally low with the overall rate for the whole programme 41%, close to the recommendation from the USA that it should not exceed 40%. Toddlerhood attrition was only 7% with a stretch objective of limiting to 10% or less but a further 3% of 'active' clients received no visits and 1% less than 10% of visits. Thus the real attrition in toddlerhood may be closer to or above10%.

The majority of leavers declined the programme or moved away with few simply disappearing or failing to be in for any appointments. This suggests both confidence to explain their needs and a good relationship with their FN. The FNs themselves pinpointed the relationship with the client as a factor that reduced the likelihood of attrition. Few decliners were negative about the programme or the FN but a small number were unhappy after their FN involved social services.

Client characteristics were largely unrelated to attrition in toddlerhood except intake vulnerability. Those with no vulnerabilities were the least likely to leave. In line with previous phases of the programme, FNs were able to detect during home visits a difference in the behaviour (less involvement and lower understanding) of clients who subsequently left.

Acceptability in toddlerhood

Overall it appears that delivering this new programme, new at least for England and the NHS, was highly acceptable for the nurses involved and according to their reports it was also acceptable both to young mothers and to their partners. According to FNs, fathers were as involved with the programme in toddlerhood as in previous phases and perhaps even more so as they enjoy play and other activities with their toddlers. The updated programme materials have helped to make the programme attractive for clients but some still feel that there is too much paperwork.

There were, however, some difficulties with the aspects of the programme materials that dealt with monitoring children's development, which becomes a specific focus in toddlerhood with the emergence of language. The Ages and Stages Questionnaires were generally liked by FNs and clients but the Communicative Developmental Inventory, completed at 21 months to determine whether any language delay is present, was not found to fit with the strength-based focus of the programme.

While the FNs report their satisfaction with delivering the programme more smoothly as they have become more experienced with the materials, in toddlerhood new situations arise that can make it more of a challenge for them to deliver the programme effectively. The most obvious is the toddlers. Thanks to their good work these children are inquisitive and active, which means that the parenting skills of clients are put to the test during visits. Other demands are also placed on clients as they progress in ways that the FNP intended, gaining employment or returning to education. This all makes for a more complex situation that FNs have negotiated well, but it can add to their stress.

The particular feature of toddlerhood is that the programme will end with graduation, when children reach 24 months. From the FN reports and indeed from the visit data it appears that some nurses are reluctant to stop visiting some of their clients. Reasons for this include feeling that the separation from the clients was going to be difficult for both FN and client, having doubts about the effectiveness of the local health visiting support or getting poor support from the local children's centres. For instance some carry on visiting after failure to make a joint visit with a local health visitor or if clients need support to become involved in other services such as children's centre groups. The way forward may be to focus on boosting confidence and self efficacy to enable the young mothers to make the transition to groups and other activities in centres or to obtain other services that they or their child require.

Potential for short-term impacts

The outcomes described cannot definitely be interpreted as resulting from the delivery of FNP since there are no comparable data for such a unique group in terms of their age and being first-time parents. Definitive answers will come from the RCT that is underway. However it is encouraging that many are using contraception, and using reliable methods such as the birth control pill, implants or injections. One third had become pregnant again during the two years since their first child's birth, on average after 10 months, and 13% had given birth to a second child before their first was two years old, with a mean spacing of 17 months. The rates of second pregnancies and births are comparable to or lower that those found in the US trials.

The number of clients becoming involved in education and employment looks encouraging in that this group may be among the least likely to be able to gain employment, with child care to arrange and a preference for part-time hours. More than one quarter took part in some education after their child's birth, half of whom had not been in education at intake.

Programme graduates described themselves and their children positively. They were positive about their parenting capacity, two thirds placing themselves at the top of a 10 point scale. They reported a high level of warmth in their parenting and a low level of harsh discipline. Mastery, sometimes referred to as self-efficacy, is a person's belief about their capability to have an influence over their life and over events. The proportion of interviewed graduates with low mastery at intake was 32% (47/145) but fewer than half that number had low mastery after graduation (15%, 22/150), representing a significant reduction for those with data at both time points.

A relatively small proportion (13/154, 8%) reported their children having marked emotional or behavioural problems. More child behaviour problems were associated with more reported parental stress, less parenting warmth and a lower level of mastery. Almost half (69/155, 45%) had visited a children's centre since completing FNP, mainly for mother and toddler play sessions, child care or to see their health visitor.

Resource issues

The level of part-time working among Family Nurses remained stable at around 20% of the total in both 2010 and 2008. This is lower than it was initially. In 2007 around a quarter of Wave 1 FNs worked part time. The stability suggests that sites have developed methods that ensure that people who want to work part time can be included in the programme, but because of the nature of the relationship with the clients based on availability most FNs need to work full-time. Staff turn-over in this first group of sites has been relatively low.

While hours of working are on average slightly over 100% the average caseload of the Wave 1 FNs was low at the time that the diaries were completed, about half of what would be expected. This would add substantially to the cost of the programme if it became a pattern in other waves. It may be related to a number of factors but principally a large number of clients will have reached the point of graduation, but at a time when recruitment was being affected by the slower process involved for recruiting to the RCT.

Related to the reduced caseloads, the FNs were less likely than in previous work diaries to record spending time either in direct contact with clients, or in activities related to these contacts such as planning for visits or travelling. In 2010 it fell to less than half of their time. They spent more time than in previous years in programme specific meetings, supervision or training and supervisors in particular also spent a substantial amount of their time in non-FNP related training. As yet, until the RCT has findings, there is no evidence about the outcomes of the programme for parents and children, but the scope for generating positive net benefits remains high.

Wave 1 and Wave 2a

Evidence from delivery in pregnancy and infancy in Wave 2a sites suggests that they have gained from the experiences of the Wave 1 sites. They are delivering a greater percentage of expected visits and attrition is substantially lower. The client group is slightly different with

fewer clients having no risk factors for poor child outcomes or many (5 or more) at intake. The Wave 2a sites are making more use of children's centres for visits.
The FNs in Wave 2a have caseloads that are closer to the recommended 25 for a full time nurse and are making more visits on average per week that Wave 1 nurses. The extent to which the time of Wave 2a FNs is spent in client contact or visit related activities is similar to that observed in the previous year in Wave 1 and greater than that observed in 2010 in Wave 1. While the recruitment to the RCT had an impact on filling caseloads for Wave 1 FNS attention should be paid to the Wave 2a caseloads as more of their clients reach graduation so that this dip in caseloads does not become a pattern, since this would increase the cost of the programme.

The future

There are currently another 45 FNP sites around the country, with more planned. Many important lessons can be learned from the experiences of the Wave 1 'pioneer' teams. First and foremost for the Family Nurses, it is clear that much has been gained by taking on this new role. Not only has professional satisfaction been related to all the new skills but it has allowed nurses to see many of their young clients flourish as parents, and gain in confidence as they think about what lies ahead of them in life. Nurses remained content with their roles and with the current progress of FNP, except in the one site where the programme was ending. In other areas some concerns about the future of the programme were expressed, but on the whole FNs sounded more secure at the toddlerhood stage than they had done when they first embarked on the programme. Several FNs recalled the anxieties they had felt at the first stage of the programme, when they were trying to recruit clients (and wondering if they could) as well as trying to master programme materials and techniques. The stress had eased, though many still found themselves working long hours to ensure that they kept up with paperwork and required visits.

Delivery of the materials in the toddlerhood phase went well and attrition was kept low. One of the important lessons from the final toddlerhood phase may be that more attention may need to be given to developing good systems for ending the programme. FNP is designed to send clients on in an upwards trajectory after their child is two without any further contact with FNs. The Wave 1 sites were in an unusual situation in that their first clients were finishing FNP at the time that clients were being recruited to the randomised trial and caseloads were not always full. However in some areas the transition to other services provided under the umbrella of the Child Health Programme was more efficient so there are opportunities to learn from them as more clients approach graduation.

Maintaining team stability remains important as a means of ensuring effective programme delivery. The current government support for the programme is likely to be helpful in local areas in discussions with commissioners. When manualised programmes are taken from one context and introduced into a different context or culture adaptations may be necessary. One such change in England, spoken of in positive terms, is that local clinical psychologists have been involved, both to provide supervision for the supervisor for the clinical caseload and then to provide consultancy to the whole team once a month. There could be other adaptations within the UK context in the future but the Wave 1 teams have demonstrated that this manualised and licensed programme can be implemented with fidelity from start to finish, retaining the majority of clients and nurses, with the potential for good outcomes for the families.

Chapter 1. Introduction

1.1 Background and aims

As part of the *'Reaching out'* plan on social exclusion (HM Government, 2006) an early intervention programme was introduced into England in April 2007. This report examines the implementation of the final toddlerhood phase of the Family Nurse Partnership (FNP) programme in the first ten sites in England. More sites have subsequently begun to provide the service, 10 of which along with eight of the original sites are taking part in an RCT to determine the programme's effectiveness (DH, 2010a). The programme is an evidence-based nurse home visiting programme developed in the USA where it is called the Nurse Family Partnership (NFP). It is offered to first-time young mothers early in pregnancy (ideally before 17 weeks gestation), continuing until their child is 24 months old. It is based on three theoretical approaches – attachment theory (Bowlby, 1969), ecological theory (Bronfenbrenner, 1979) and self-efficacy theory (Bandura, 1977).There are three main aims, to improve maternal and child pregnancy outcomes, to improve child health and developmental outcomes, and to improve parent's economic self-sufficiency.

Visits are mainly weekly or fortnightly with materials for each visit plus a number of standardised data forms to record both the visits and details of the participants and their progress. While there is a detailed curriculum it is expected that the Family Nurses will use the materials flexibly, in relation to particular client needs. A full-time Family Nurse (FN) has a maximum of 25 clients and FNs generally work in teams of at least four with a supervisor, who can supervise up to eight FNs, and an administrator. Supervision is frequent and includes both individual work and group sessions. In the USA it has been tested in three RCTs with benefits found for mothers and their children and in particular more benefits for the most vulnerable (Olds, 2006). Specifically, the trials identified better maternal prenatal health, fewer child injuries, longer intervals between subsequent births, more father involvement, more maternal employment, less reliance on welfare support, better child school readiness and, when the children were teenagers, less substance use initiation and fewer behaviour problems.

The programme has a number of indicators to help sites track the extent to which they are delivering the programme with fidelity, based on data from the three US trials and early US dissemination experiences. These are designed to help supervisors improve quality and are considered long-term targets to strive for over time (thus are referred to as 'stretch objectives'). Aspects of delivery presented in this report are the amount and nature of the programme materials that are presented on average in relation to the toddlerhood stretch objectives, responses to the materials from clients and partners, attrition, perceptions of the materials presented in the toddlerhood phase, and the process of integrating the graduating clients and their children into universal health care provision.

This third report follows the first cohort of 1303 clients in the 10 Wave 1 sites in England through the toddlerhood phase (12 to 24 months) to the time that for the majority (1177) the programme would have been complete in that their children had or were predicted on the basis of their expected due dates at intake to have reached 24 months. Information was available that this group of 1177 included 18 foetal deaths, three stillbirths and four child deaths. Six hundred and ninety of the 1177 remained enrolled in the programme throughout so much of the information on the visits and clients' progress is only available for that group.

In this phase the evaluation had a four main aims; to determine:

- Whether FNP is being implemented with fidelity in England during the final toddlerhood phase?
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- Whether FNP is acceptable in its entirety up to the time that children are 24 months of age – to young mothers, their partners and to Family Nurses?

- The nature of the experience of completing the programme for clients and for Family Nurses.

- Whether it is likely that FNP will benefit the women, children and families in receipt of FNP?

  In addition, to see whether the programme has become more 'bedded-down' within the context of services for children and families, a comparison has been made between the first and second waves of delivery in pregnancy and infancy.

1.2 Brief summary of previous reports

Two previous reports have described earlier phases of the programme's implementation. The first provided information about the feasibility of the first crucial pregnancy stage within the context of universal NHS provision, recruiting clients and delivering the programme until their infants are born (Barnes et al., 2008). The main findings were:

- The programme could be delivered effectively, but some sites were some way from the 'stretch objectives' that the US model links with optimal programme delivery. In particular it proved challenging to provide the optimal number of visits during pregnancy.

- Major factors related to providing fewer visits were the newness of the staff to working in this particular way, organisational delays in some areas in establishing the infrastructure necessary for smooth team working and pressure to recruit their full caseload in a short space of time.

- The programme reached clients likely to benefit, particularly those aged under 20. Further testing was suggested to decide whether it should be offered to 20-22 year olds. The results of this testing are reported in a separate report (Barnes et al., 2010).

- The programme was acceptable but in some sites attrition during pregnancy was high. Fathers were involved in many visits and both the clients and their partners praised the strength-based approach.

- Practitioners working in the programme valued the learning, recognised the potential benefits of the programme to clients, and considered it differed substantially from their previous roles, mainly as health visitors or midwives. They commented positively on the

structured programme and reported developing a different kind of relationship with clients, using new skills and addressing need.

- The first year report presented a range of short-term programme objectives, including smoking reduction during pregnancy, breastfeeding rates, engagement with fathers and various other client behaviours. These indicated that there were likely to be promising outcomes in this phase, particularly the breastfeeding rate which was higher for this age group than the rate from a comparable national sample.

- The second report examined implementation of the programme during infancy, defined as birth to 12 months (Barnes et al., 2009). Its key messages were that:

- The FNP programme can be delivered well in infancy, in terms of both the nature of the visits and the extent to which clients are retained in the programme. However it was still proving a challenge to delivery the expected number of visits.

- Clients continued to praise the programme and their Family Nurse (FN) highly and reported that receiving FNP was making a difference to their parenting and to their lives.

- The strength of the client-Family Nurse relationship was identified as the key to successful delivery, to making an impact, and to retaining clients.

- Data incompleteness was a problem, limiting the likelihood of reliable impact data from the forms competed routinely as part of the programme. From the available data the infants born to FNP clients had gestations and birth weights comparable to or slightly better than those expected from young first-time mothers.

- Delivery with fidelity was associated with a close knit team, with no or low staff turnover, and with strong support for FNP from the PCT and local authority. When staff turnover occurred it was related to a lack of clarity about where FNP was positioned in relation to other professional opportunities for nurses.

- Site variation in the extent to which the programme has support from local commissioners was linked with team cohesiveness and stability, relationships between the supervisor and FNs, and the capacity of individuals assigned to integrate FNP into local services.

- Commissioners focussed on the cost of the programme. The cost of delivery appeared to be approximately comparable to the USA but a substantial proportion of staff time was taken up with non-FNP activities, including professional development and mandatory NHS training.

1.3 Methodology

1. *Interrogation of the database that includes all forms completed by FNP nurses to illuminate issues of fidelity of delivery, referrals to additional services and attrition.*

FNP practitioners complete a range of standardised forms, describing the characteristics of each client, their health, their health related behaviour, their relationships, and their infant's health and development. These are completed when the clients start the programme with

some repeated during pregnancy, then at the infant's birth and at intervals until they graduate from the programme. In addition information is saved about the content of each home visit, their frequency, duration, and the observed behaviour of the client and others present, especially the partner. If a client terminates involvement in the programme a form is also completed. All these, suitably anonymised, are sent to a central database managed by NHS Connecting for Health and were extracted for the evaluation on July 13th 2010 for the original client cohort in Wave 1, described in previous implementation evaluation reports (N=1303) and for clients in 10 Wave 2a sites in England who had completed their pregnancies (N=1072).

Toddlerhood should have been complete (i.e., the child was or would have been 2 years old) for the majority of the first cohort of Wave 1 clients (N=1177/1303, 90%). Analyses of delivery include three different groups, the total cohort, those with children who were or would have been at least 24 months old based on infant birth forms or based on their expected due date at intake (to give the most accurate estimate of delivery in toddlerhood) and finally for those with a child at least 24 months old who were described as active throughout the entire programme (N=690) to document optimal delivery. While pregnancy was by definition complete for the Wave 2a clients identified, infancy was complete (i.e., child was at least 12 months old) for just under half (495, 46%). Thus Wave 2a infancy delivery results are liable to modification in the future.

An intake vulnerability index was created using factor analysis (Barnes et al., 2010) based on eight characteristics identifiable in pregnancy to the FNs and known in other populations to be risk factors for subsequent poor child outcomes. The eight characteristics are: no partner, not living with mother, very low income (less than £3,100 p.a. or entirely from benefits), smoked in previous 48 hours, no GCSEs, any history of abuse, currently homeless, and receiving mental health services. These vulnerabilities may of course continue beyond intake to the programme.

2. *Telephone interview with clients completing FNP*

Interviews were conducted with a random sample of 155 clients completing FNP between September 2009 and March 2010. Using existing scales they were asked about their perceptions of their capacity as a parent after completing FNP, about their perceived level of parenting stress, their own self confidence and mental health and their child's socio-emotional development. They were also asked about their use of services at Sure Start Children's Centres and open-ended questions covered the process of completing FNP and the transition to universal services.

3. *Telephone interviews with leavers*

A telephone interview schedule was developed in year 2 to ask about reasons for leaving, other support and thoughts about the FNP programme. While the amount of information gained from those who leave for practical reasons (e.g. moving out of the area, returning to work) has been found to be limited, interviews were conducted only with those who were said by FNs (on the Client Activity Status Form) to be leaving because they were unhappy with the programme, or due to factors such as their FN leaving. There were relatively few leavers falling into this category during toddlerhood and for many leavers the contact details supplied were not current or none were available. It was only possible to interview seven leavers.

4. *Nurse and supervisor interviews*

Qualitative interviews were conducted with all 45 Wave 1 Family Nurses and supervisors who had been delivering FNP for at least 2 years. FNs were approached once they had experienced at least 2 mothers completing the programme and interviews were conducted between October 2009 and February 2010. Questions covered their current working hours and caseload and the number of clients who had currently completed the programme. Further sections included delivering the programme in toddlerhood and working with other practitioners, particularly in the handover to universal health visiting services once children were 24 months. They were encouraged to talk about their perceptions of outcomes for the mothers and children, using questions originally posed at their first training session. They were asked about their own training needs during the previous two years and to reflect on future needs. They were asked about supervision and support from their managers and from local commissioners.

5. *Nurse work diaries*

Family Nurses and supervisors were asked to complete a detailed diary for two weeks in March, to coincide with a time when the majority were not on leave and there were no FNP training courses running. The diaries took the same format as two previous administrations, in pregnancy and infancy.

6. *In-depth study of FNP teams in four sites.*

Four Family Nurse teams, selected on the basis of delivery in pregnancy and infancy to represent either above average or below average performance, were asked in group discussion to talk about their role as Family Nurses, their thoughts about delivery with a particular focus on toddlerhood, their experiences of graduation and their expectations of FNP in the future. Supervisors and Project leads were also interviewed separately about the same topics.

Chapter 2. Programme delivery in the toddlerhood phase

2.1 Number of visits

The programme curriculum describes 22 visits in toddlerhood. They are designed to take place fortnightly for 9 months, from 12 to 21 months, with one visit a month from that point up to graduation from FNP at 24 months. The guidelines from the national office (USA) recommend as a stretch objective that sites should aim to deliver at least 60% of the expected number of visits. In a research trial it is usual to base the expected visits on the total number in the programme. This means that if a client is known to have left, even for circumstances such as miscarriage or infant death, the maximum number of visits will still be 'expected'. For service provision in contrast it is usual, if a client leaves, for their place to be taken by another and the quality of delivery is based on existing clients. Thus for calculations of expected visits in toddlerhood, any client leaving in pregnancy or infancy for any reason is expected to have no toddlerhood visits. Similarly, if they leave part-way through toddlerhood then, after the form has been submitted noting their departure, the FN will not be expecting to visit them so the number of expected visits for this implementation evaluation is 'frozen' at the time of leaving. Only clients remaining active until graduation are expected to receive the 22 visits that make up the toddlerhood curriculum. The proportion of expected visits receive is based either on the total 22 or on the pro-rated number reduced to take into account being a leaver.

Delivery data are presented for three groups: all the original Wave 1 clients (N=1303); clients who might have completed toddlerhood (i.e., their infant is or would have been at least 24 months old at the data cut-off point; N=1177); and clients said to be active throughout toddlerhood, i.e., according to forms submitted they had either graduated from FNP due to their child reaching 2 years (N=547) or they were still defined as active clients at or after their child's second birthday (N=143; total N=690). The number of expected visits has been capped at the maximum number in the toddlerhood programme materials (22). However, some clients received visits after their child's second birthday and these visits have been included in the toddlerhood visit total until the point that the child reached 26 months since there may be a need to visit after the birthday to 'hand over' to the local health visiting service, or to introduce the client to other appropriate services. Thus they could receive more than 100% of expected visits. Information is provided separately about the extent to which visits continue after children reach 26 months for some clients.

It is of interest to look at the experiences of the total client group even though some will have left prior to toddlerhood. US trial evidence (Olds, 2006) similarly includes the total group enrolled at the start of programme delivery when estimating impact in comparison with not receiving FNP. Taking the total client group (N=1303; first column in Table 2.1) and those whose child had or was predicted to have reached at least 24 months (N=1177; second column in Table 2.1) the mean number of visits received in toddlerhood was similar and represented about one half of expected visits. The average number of visits expected in toddlerhood has a minimum of 0 because some of the clients in each of these groups left the programme during pregnancy or infancy.

Table 2.1 Visits in toddlerhood to clients in the original Wave 1 cohort

	All Clients	Child is/would be 24+ months	Active through to 24 months
Total N	1303	1177	690
Mean visits expected	13.1 (0-22)	13.7 (0-22)	22
Mean visits completed	7.4 (0-34)	7.8 (0-34)	12.8 (0-34)
N with expected visits[1]	857	774	690
Mean % expected visits	54.9 (0-200)	55.4 (0-200)	58.0 (0-155)
≥60% of expected visits	362, 42%	327, 42%	308, 45%

It is not possible to calculate the proportion of expected visits received for clients who left prior to toddlerhood (since 0 received divided by 0 expected does not give a valid number). In total 446 clients left (see Table 2.2), 403 of those with a 24 month old. For the remaining clients the proportion of expected visits received was on average just over half (55%; see Table 2.1). The proportion of clients whose programme delivery was at or beyond the stretch objective of 60% was 42% of those with any expected visits (see Table 2.1) or 28% of all clients (see Table 2.2).

A small proportion of clients still active in toddlerhood had received no toddlerhood visits (see Table 2.2). The most frequent experience was to receive just over half the expected number (50-59%) or just over 60% (60-69%) and just over one quarter received 60% or more of visits. Figure 2.1 shows the distribution of percentage of expected visits received for all clients with a child at least 24 months of age excluding the 403 for whom 0 visits were expected and 0 visits were received.

For the smaller group of clients said to be active through the entire programme the mean number of visits expected was 22 and the average proportion of expected visits received was slightly greater than for the total sample (58%) with 45% receiving at least 60% of the expected number of visits (see Table 2.1). However even for that group it is evident that some (2%) were not visited at all for the whole year (see Table 2.3 and Figure 2.2).

With new guidelines introduced from Wave 2a onwards clients not seen for six months are now noted to be ‘inactive’ so that the FN can then replace them in her caseload, while keeping the possibility of renewing visits with inactive clients if they later make contact. Wave 1 FNs did have the option of removing a client from her caseload after excessive missed appointments but did not do so for these clients. Possibly they were thought to be vulnerable so FNs were reluctant to remove them? Wave 1 FNs were in a unique situation when the RCT recruitment started in that caseloads were low for a while, as the systems became more effective for recruiting clients to the trial. This enabled them to keep trying for longer with enrolled clients who remained elusive.

[1] Calculation of the proportion of expected visits completed excludes those who left the programme in pregnancy or infancy as both expected and received visits are zero.

Table 2.2 Distribution of the percentage of expected toddlerhood visits received in toddlerhood for all clients and for all those whose child had/would have reached 24 months, including leavers

% of expected visits	All clients N=1303	%	Cumulative %	Child 24 months old N=1177	%	Cumulative %
Left programme, expect none	446	34.2	34.2	403	34.2	34.2
0%	49	3.8	38.0	39	3.3	37.5
1-9%	18	1.4	39.4	16	1.4	38.9
10-19%	29	2.2	41.6	23	2.0	40.9
20-29%	47	3.6	45.2	41	3.5	44.4
30-39%	80	6.1	51.3	72	6.1	50.5
40-49%	85	6.5	57.8	79	6.7	57.2
50-59%	187	14.4	72.2	177	15.0	72.2
60-69%	135	10.4	82.6	122	10.4	82.6
70-79%	88	6.8	89.4	81	6.9	89.5
80-89%	68	5.2	94.6	65	5.5	95.0
90-99%	30	2.3	96.9	26	2.2	97.2
100-119%	30	2.3	99.2	24	2.0	99.2
120+%	11	0.8	100	9	0.8	100
≥60%	**362**	**27.8**		**327**	**27.8**	

Tables 2.4, 2.5 and 2.6 provide figures by site for delivery in toddlerhood. It can be seen in Tables 2.4 and 2.5 that there is considerable variability between sites in both the mean number of visits expected and provided. Site 2 expected the most visits and delivered the most per client with site 6 on average the least for both indicators. It should be noted however that this site stopped delivering FNP before some clients children reached 24 months so it is to be expected that their delivery would be lower.

These means are also influenced by the proportion of clients leaving; if more leave in a site then fewer visits will be expected in total and fewer will be delivered since the leavers then have none. Site 2 had very low attrition and site 6 the highest (see Chapter 3, Table 3.1). The site means for the percentage of expected visits received take into account leavers in that they are not expected to have any visit and the site means are closer. Based on the proportion of expected visits received, site 3 delivered more of the expected visits with site 2 the second highest and site 7 the lowest. For all the clients described in Table 2.6, active throughout the programme, the mean number of visits expected is 22 and the difference between sites in the average number of completed visits is smaller, ranging from 10.9 up to 14.4. There is nevertheless still a range in the percentage of expected visits received, as high on average as 65.2 % in site 3 and 50% in two sites (7, 8).

Figure 2.1 Distribution of the percentage of expected toddlerhood visits received for clients whose infants were or would be at least 24 months old at cut-off and who did not leave in pregnancy or infancy (N=774)

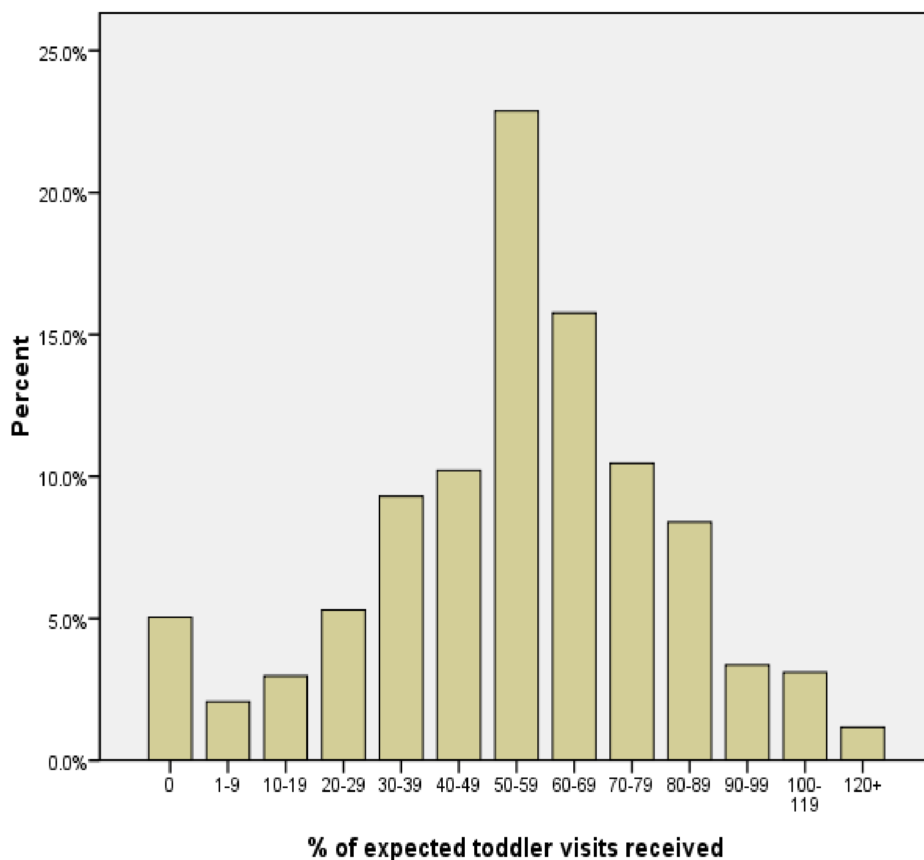


Table 2.3 Distribution of the percentage of expected visits received in toddlerhood for all clients active through to the end of toddlerhood (N=690)

Proportion of expected visits received	Active throughout programme	%	Cumulative %
0%	13	1.9	1.9
1-9%	10	1.4	3.3
10-19%	17	3.0	5.8
20-29%	33	5.3	10.6
30-39%	67	9.3	20.3
40-49%	73	10.2	30.9
50-59%	169	22.9	55.4
60-69%	116	15.8	72.2
70-79%	78	10.5	83.5
80-89%	62	8.4	92.5
90-99%	25	3.4	96.1
100-119%	19	3.1	98.8
120+%	8	1.2	100
≥60%	**308**	**44.6**	

Figure 2.2 Distribution of the percentage of expected visits received in toddlerhood for clients active throughout the programme to the end of toddlerhood (N=690)

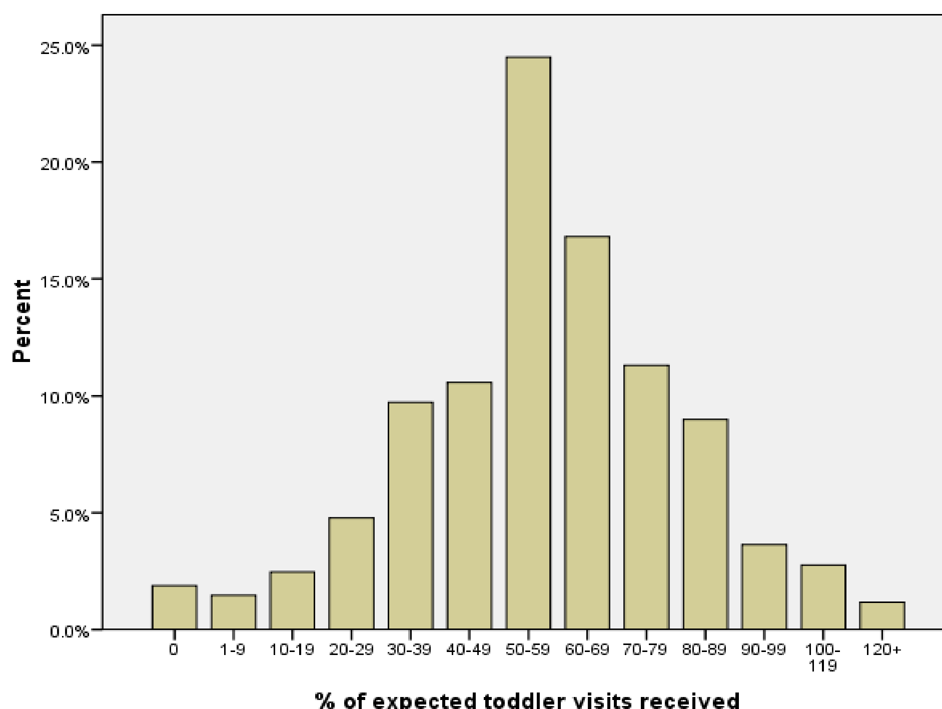


Table 2.4 Programme delivery by site in toddlerhood for all Wave 1 clients (N=1303)

Site	Total N	Mean expected visits	Mean visits	range	N [2]	Mean % of expected	% range	N 60% or more (%)
1	118	13.4	7.3	0-29	82	51.2	0-132	30 (37)
2	111	17.5	11.0	0-33	92	61.7	0-159	45 (49)
3	190	12.6	8.1	0-23	117	63.1	0-107	70 (60)
4	153	12.2	6.8	0-24	90	52.9	0-109	35 (39)
5	123	14.2	8.5	0-29	85	58.4	0-132	44 (52)
6	100	9.7	5.0	0-18	52	52.9	0-200	17 (33)
7	112	13.0	6.6	0-30	72	49.8	0-136	29 (40)
8	133	13.4	6.2	0-34	85	44.9	0-155	19 (22)
9	139	11.8	7.1	0-28	91	56.1	0-127	43 (47)
10	124	14.0	7.2	0-24	91	52.7	0-125	30 (33)
	1303	**13.1**	**7.4**	**0-34**	**857**	**54.9**	**0-200**	**362 (42)**

[2] Calculation of the percentage of expected visits during toddlerhood achieved excludes those for whom no toddlerhood visits were made or expected, i.e. those who had left during pregnancy or infancy for whom expected visits = 0 and completed visits = 0.

Table 2.5 Programme delivery by site in toddlerhood for all Wave 1 clients whose child was or would have been at least 24 months (N=1177)

Site	Total N	Mean expected visits	Mean visits	range	N [3]	Mean % of expected	% range	60% or more (%)
1	102	14.7	8.2	0-29	73	55.1	0-132	29 (38)
2	107	17.5	11.2	0-33	88	62.6	0-150	44 (50)
3	187	12.6	8.1	0-23	114	63.0	0-107	68 (60)
4	147	12.5	6.8	0-24	88	52.2	0-109	33 (38)
5	107	14.9	8.9	0-29	75	58.1	0-132	39 (52)
6	98	9.9	5.1	0-18	52	52.9	0-200	17 (33)
7	96	14.2	7.2	0-30	65	49.9	0-136	25 (39)
8	123	13.7	6.5	0-34	78	46.6	0-155	19 (24)
9	110	13.2	8.1	0-28	71	57.5	0-127	34 (48)
10	100	14.9	7.6	0-24	70	49.9	0-109	19 (27)
	1177	**13.7**	**7.8**	**0-34**	**774**	**55.4**	**0-200**	**327(42)**

Table 2.6 Programme delivery by site in toddlerhood for Wave 1 clients who remained active through to the end of toddlerhood (N=690)

Site	Total N	Mean visits [4]	range	Mean % of expected	% range	N 60% or more (%)	Visits 26 + months N (%)
1	60	12.2	0-29	55.4	0-132	23 (38)	0
2	83	14.1	5-33	64.2	23-150	43 (52)	10 (12)
3	102	14.4	3-23	65.2	14-105	65 (64)	0
4	81	12.3	1-24	55.8	5-109	33 (41)	3 (4)
5	66	13.9	0-29	63.3	0-132	38 (58)	2 (3)
6	39	11.4	1-18	51.6	5-82	12 (31)	1 (3)
7	60	11.0	0-30	50.2	0-136	23 (38)	1 (2)
8	73	10.9	0-34	49.6	0-155	19 (26)	30 (41)
9	61	14.3	4-28	64.8	18-127	34 (56)	11 (18)
10	65	11.5	3-24	52.0	14-109	18 (28)	6 (9)
Total	**690**	**12.8**	**0-34**	**58.0**	**0-155**	**308 (45)**	**64 (9)**

A site can achieve a high mean for expected visits by providing a high percentage to some clients, even up to 155%, but a smaller percentage of expected visits to other clients.

[3] Calculation of the percentage of expected visits during toddlerhood achieved excludes those for whom no toddlerhood visits were made or expected, i.e. those who had left during pregnancy or infancy for whom expected visits = 0 and completed visits = 0.

[4] 143 clients with children 24 months or older were said to active (maximum child age 34 months) and some of these continued to receive visits. The values for mean visits received include only visits received up to 26 months.

However site 3 had the greatest proportion of clients at or above the stretch objective, delivering at least 60% of expected visits to 64% (65/102,).

In Site 3 no client received visits after 26 months (see Table 2.6). At least one visit after 24 months (the 'official' end of the programme) might be necessary in order to hand over smoothly to the local health visitor, and this may take a while to arrange. However across all 10 sites 107 visits were made to 64 clients whose infants were beyond 26 months (9%), some receiving visits up to 30 months of age. These took place predominantly in three sites (2, 8 and 9, see Table 2.6).

Visits made and client characteristics at intake

The extent to which expected visits were delivered was examined in relation to how many of eight specific vulnerabilities clients had reported at intake (see Chapter 1 for the full list and Appendix A for numbers per site). The relevant data on some or all the vulnerabilities were available for 1109 of the 1177 clients whose child had, or would have reached 24 months of age. Of those, 158 (14%) had no vulnerabilities at intake, the majority had either one (332, 30%) or two (288, 26%) while smaller proportions had three (193, 17%), four (86, 8%) or five (41, 4%). Only nine clients had six vulnerabilities (0.8%), two (0.2%) had seven while no client had all eight. For the purposes of analysis they have been grouped as those with none, 1 or 2, 3 or 4, or 5 plus and only those with complete data for all eight indicators are included (N=666).

Since visits in pregnancy and infancy has not previously been examined in relation to these vulnerabilities Table 2.7 shows information on delivery in all three phases of the programme. In pregnancy the clients with most vulnerabilities (5 to7) or no vulnerabilities received a greater percent of expected visits. The same pattern applied to the proportion who received at least 80% of pregnancy visits, more likely for clients with no vulnerabilities or with many. The pattern is more mixed in infancy, when clients with the most vulnerabilities receive the highest mean percent of expected visits. There was no significant relationship in toddlerhood between the number of vulnerabilities at intake and the visits received.

Table 2.7 Delivery of FNP in relation to the number of eight vulnerabilities identified at intake (only clients whose child had or would have reached 24 months and with complete data for all eight indicators)

	None N=71	**1 or 2 N=332**	**3 or 4 N=210**	**5 to 7 N=53**	
Mean pregnancy visits	8.9	8.0	8.0	8.7	p = .07
Mean % expected pregnancy visits	74.1	67.9	67.7	75.4	p = .02
≥80% expected pregnancy visits	44%	29%	31%	45%	p = .02
Mean infancy visits	15.9	14.5	14.1	16.5	p = .07
Mean % expected infancy visits	59.4	55.5	56.2	63.1	p = .09
≥65% expected infancy visits	53%	34%	38%	42%	p = .03
Mean toddlerhood visits	10.5	8.5	7.9	8.5	p = .08
Mean % expected toddlerhood visits	57.5	54.2	59.8	54.2	n.s.
≥60% expected toddlerhood visits	46%	42%	46%	36%	n.s.

2.2 Nature of visits

The guidelines specify both the recommended length of visits (at least 60 minutes) and the coverage of content in relation to five domains. It can be seen from Table 2.8 that this was achieved overall but sites vary considerably in the average time spent with clients, less than the guideline of 60 minutes in site 1, but more than 80 minutes on average in sites 4 and 7. It appears that on average the FNs in Wave 1 have not altered the way they cover the domains substantially since infancy. With an overall average of 18%, all the sites spent more time on personal health that the stretch objective of 10 to 15%. Similarly with an overall average of 13% all sites spent on average more than the stretch objective of 7 to 10% for environmental health. In contrast the average time spent on the life course domain, which is designed as 18-20% of the programme in toddlerhood, was only 13%, with no site within the recommended range Family and friends and the maternal role are covered as recommended by most sites. One exception is site 7, where FNs appear to have spent much less time on the maternal role than any other site, and much more time on family and friends and environmental health, both beyond the guideline ranges.

Table 2.8 Nature of visits completed during toddlerhood in Wave 1 for all clients who received any toddlerhood visits (N=810)

Site	Mean visit length	Personal health	Maternal role	Life course	Family and friends	Enviromental health	% of plan
	(min.)	**10-15%**	**40-45%**	**18-20%**	**10-15%**	**7-10%**	
1	57.1	17.5	44.0	13.6	13.1	11.9	94.3
2	78.8	20.3	40.6	11.8	15.3	12.0	97.5
3	72.0	15.4	45.3	11.8	14.6	13.0	95.6
4	83.6	16.8	43.1	15.0	12.0	13.0	94.3
5	74.9	17.6	43.2	15.1	13.2	10.9	96.3
6	71.7	17.7	44.1	11.3	16.2	10.7	85.7
7	82.2	21.2	26.0	16.6	18.3	17.8	92.4
8	79.7	16.5	42.3	13.0	14.6	13.5	90.9
9	79.7	17.8	46.4	11.1	13.8	10.9	87.8
10	73.9	20.2	39.9	13.2	14.1	12.6	85.0
Total	**75.4**	**18.0**	**41.9**	**13.2**	**14.4**	**12.6**	**92.3**

Table 2.9 Nurse ratings of Wave 1 clients' and partners' behaviour during toddlerhood visits (1 = low to 5 = high)

Site	N	Client Involve-ment	Client Under-standing	Client conflict	N (% of total N)	Partner involve-ment	Partner under-standing	Partner conflict
1	76	4.6	4.3	1.2	55 (72)	3.7	3.6	1.0
2	91	5.0	5.0	1.0	57 (63)	4.6	4.8	1.0
3	114	4.6	4.5	1.2	65 (57)	3.6	4.1	1.2
4	86	4.8	4.8	1.1	54 (63)	3.7	4.3	1.2
5	81	4.9	4.7	1.0	40 (49)	4.1	4.7	1.0
6	50	4.0	3.9	1.6	27 (54)	2.8	3.6	1.7
7	60	4.7	4.7	1.2	36 (60)	4.3	4.6	1.2
8	78	4.4	4.4	1.2	32 (41)	3.0	3.1	1.1
9	85	4.5	4.2	1.1	44 (52)	3.5	3.6	1.1
10	89	4.6	4.6	1.1	43 (48)	3.6	4.5	1.1
	810	**4.6**	**4.5**	**1.1**	**453(56)**	**3.8**	**4.1**	**1.1**

Partners were present in total for 2067 of 10870 all toddlerhood visits (19%), slightly lower than the percentages for previous phases (22% and 24%). There was at least one visit with the father present and his behaviour summarised for 56% of the clients (453/810; see Table 2.9) with variability between sites from 41% in site 8 up to 72% in site 1.

The ratings made of client and partner involvement, understanding and conflict with the materials in toddlerhood are overall very similar to those made in infancy. There is some different between sites (see Table 2.9), with site 2 being the most positive on average about clients and partners and sites 6 and 8 the least positive. The means are rounded up to one decimal place so the mean of 5.0 does not mean that all clients were rated 5 on each occasion, but on average the mean is above 4.95.

2.3 Where do visits take place?

The FNP is designed to be a home-visiting programme and overall in Wave 1 sites 85% of visits took place in clients' homes (see Table 2.10). There was however some variability between sites, with a range from 65% to 91% although most conducted between 80% and 90% in clients' homes.

The site with only two thirds of visits in clients' homes (site 6) reported that one quarter took place in a home, but not that of the client; instead it was the home of a family member or friend. It is possible that the team decided that if a client lived with her parents then the home was not hers but that of a family member. It may need to be clarified that the client's home is wherever she is predominantly living, whether or not she is in charge of the home.

Apart from site 6, between 3% and 8% of visits took place in the home of a family member or friend. There was no obvious pattern between the phases of the programme in making non-client home visits. These are likely to be related to specific clients, for example to the need to talk to the client away from a partner, or because they tended to be mobile and it was better to 'catch' them when they were visiting a friend than miss a planned visit.

Originally it had been indicated that FNP teams would ideally be located in children's centres and some teams were. Children's centres can provide a suitable venue when it is necessary to meet a client away from home and in toddlerhood this could also provide an opportunity to engage with other services. On the whole, few visits took place in these settings. Nevertheless it can be seen that more did take place in these locations in toddlerhood than in the other phases, suggesting that the FNs were working to make sure that their clients knew about what was available in the centres before they graduated from the programme. This is discussed in more detail in Chapters 4 and 5. Most other possible locations such as a clinic, within the community, or at a school or college were rarely used. Such locations would lack privacy and would not be the most appropriate for creating a context where the FN and client could develop a close, therapeutic relationship.

Table 2.10 Location of visits in Wave 1 by site and phase

Site	Home	Family, friends	Children's Centre	Doctor, Clinic	Community	School, college	Other
1 N=3282							
Pregnancy	95	2.7	0.1	1.0	0	0.3	1.4
Infancy	90	4.4	0.4	1.3	0.3	0.1	3.9
Toddler	89	4.1	2.0	1.4	0.8	0.1	2.7
TOTAL	91	3.8	0.7	1.2	0.3	0.2	2.9
2 N=4052							
Pregnancy	81	7.6	0	1.5	0	0.2	9.2
Infancy	81	7.8	1.0	1.4	1.5	0.1	7.5
Toddler	86	4.5	1.8	0.9	2.5	0.3	4.0
TOTAL	83	6.7	1.0	1.3	1.5	0.2	6.8
3 N=5749							
Pregnancy	91	6.7	0.3	0.0	0.2	0.1	2.2
Infancy	86	9.9	0.5	0.3	0.0	0.2	2.9
Toddler	88	6.9	2.3	0.1	0.5	0.0	2.3
TOTAL	88	8.1	0.9	0.2	0.1	0.1	2.5
4 N=3637							
Pregnancy	86	4.9	0	1.3	0	0.6	6.9
Infancy	89	5.0	0.1	0.4	0.2	0	4.8
Toddler	91	4.6	1.0	0.6	0.9	0	2.4
TOTAL	89	4.9	0.3	0.7	0.3	0.2	4.7
5 N=3873							
Pregnancy	91	5.7	0	0.3	0.1	1.3	2.1
Infancy	90	5.4	0.2	0.3	0.5	0.1	3.7
Toddler	89	4.0	1.7	0.1	2.0	0	3.0
TOTAL	90	5.1	0.6	0.2	0.8	0.4	3.1
6 N=2474							
Pregnancy	64	27	0	0.3	0.3	0.1	8.9
Infancy	61	30	0.6	0.1	0.8	0	7.4
Toddler	76	12	5.2	1.0	1.8	0	4.0
TOTAL	65	26	1.4	0.3	0.8	0	7.2
7 N=3081							
Pregnancy	86	7.1	0.2	0.5	0	0	6.0
Infancy	88	5.4	0.3	0.3	0.2	0.1	6.0
Toddler	82	5.1	5.9	0.1	2.7	0	4.6
TOTAL	86	5.8	1.7	0.3	0.7	0	5.6
8 N=3214							
Pregnancy	85	9.1	0	1.5	0	0.1	4.6
Infancy	82	8.7	0.1	0.6	0.5	0.1	8.2
Toddler	79	4.9	2.9	0.5	4.1	0.1	8.8
TOTAL	82	7.8	0.8	0.8	1.3	0.1	7.5
9 N=3572							
Pregnancy	84	8.5	1.0	1.3	0.7	0.2	4.3
Infancy	84	7.1	1.0	0.6	0.2	0.2	6.6
Toddler	79	10.4	4.9	0	1.1	0.4	4.8
TOTAL	83	8.3	2.0	0.6	0.6	0.3	5.5
10 N=3285							
Pregnancy	91	2.9	0	2.5	0	0.9	2.6
Infancy	88	3.3	0.7	1.3	0.1	0.4	6.1
Toddler	87	4.2	2.3	0.9	0.3	0.1	5.0

TOTAL	89	3.4	1.0	1.5	0.2	0.4	5.0
ALL N=36219							
Pregnancy	86	7.7	0.2	0.9	0.1	0.4	4.5
Infancy	84	8.3	0.5	0.6	0.4	0.1	5.5
Toddler	85	5.8	2.7	0.5	1.6	0.1	4.0
TOTAL	85	7.5	1.0	0.7	0.6	0.2	4.8
Site Range	61-95	2.7-30	0-5.9	0-2.5	0-4.1	0-1.3	1.4-9.2

2.4 Conclusions

Delivery of the programme in toddlerhood in terms of the proportion of expected visits received is close to the stretch objective. The target to aim for is 60% of the 22 visits and the average across all 10 sites was close at 55%, even closer for those clients identified as active throughout (58%). The most common proportion of visits received was just under the target at 50 to 59%, or just above (60 to 69%). Nevertheless a small number were said to be active for the year and included in the FNs caseload but did not see the FN at all. The newer sites from Wave 2a onwards have an 'inactive' category for those clients who have not received a visit for 6 months, allowing the FNs to take on new clients, and these Wave 1 clients would be categorised in that way within the new system.

As was the case in pregnancy and infancy there was substantial variability in toddlerhood visit dosage between sites, two with the mean percentage of visits to clients above the 60% level and three below 50% with the remainder in between. In addition some clients continue to receive visits long after the time that they should have graduated. In Chapter 4 FNs describe reasons why some are reluctant to stop visiting some clients. However one site made visits after 26 months to almost half of their clients, which means in effect that they are not delivering FNP with fidelity since one of its major aims is to provide support until children are 24 months of age. For this group of sites the continuation of visits may have been related to the initiation of the RCT. They could not take on non-RCT clients during the recruitment period and if the rate of new RCT clients was slow, as it was in some areas, they may have thought they might as well continue to support those already on their case-loads.

The extent to which more or fewer visits were made was related to client vulnerability in a U-shaped manner. Those with no vulnerabilities and those with many (5 to 7 of 8) received the most visits with others who had a between 1 and 4 vulnerabilities in between. This was most marked in pregnancy with a similar pattern in infancy, but did not extend to toddlerhood. This is not surprising since some of the intake vulnerabilities (e.g. no GCSEs, reliant solely on benefits) might have changed through receiving the FNP – as information in Chapter 5 indicates). However it also suggest that FNs may be working very hard to see the most vulnerable clients, the least vulnerable make themselves available, while those some difficulties but not so marked receive the least attention.

The fidelity of delivery is measured not only in the number of visits but in their length and content. In previous phases all sites has average visit lengths beyond the stretch objective of 60 minutes. In toddlerhood for the first time one site has a mean below 60, with a wide range between sites, from 57 minutes up to 84. The shorter visits may reflect the busier lives of the mother with toddlers and possibly also employment or study. Shorter and longer

visits may also reflect the challenge of keeping the mother engaged with a busy toddler in the room. Both of these issues are discussed in detail in Chapter 4.

In toddlerhood the content of the visits is designed to shift away from the mother's health to her life course. The average time spent on life course was below the target of 18-20% in all sites while in all but one the average time spent on the mother's personal health was above the 10-15% target. Possibly this focus on education and employment and away from health is not easy for nurses who have in their previous work focussed primarily on maternal and child health. They may require more training in the life course materials to highlight their importance relative to the maternal role and maternal health. Environmental health continues to be more of a focus than the programme intended. These variations from the stretch objectives developed in the USA may also reflect cultural differences and the different service context in the UK. This may become more evident when delivery is examined in the subsequent waves of the programme.

FNs rated their clients as highly involved in the programme, which was also the case in previous phases, with a similar high level of understanding and a similar very low level of conflict with the materials. Site differences reveal that some sites, presumably keeping the strength-based approach in mind, rate almost all clients at the maximum level of understanding and involvement. While this may be a good approach in some respects, it also means that the ratings are of relatively little use when for instance they use this information in supervision.

There was some expectation that more visits might be made in children's centres in toddlerhood, so that joint visits with the FN could take place as they found out about the range of services on offer. There is some evidence that this did take place in toddlerhood, particularly when the FNP team were themselves based in a centre.

Chapter 3. Attrition

3.1 Rates of attrition by site and phase

It is suggested by the US National Office that attrition should ideally be limited to 10% during pregnancy, 20% in infancy and 10% in toddlerhood, amounting to 40% overall. Looking at the total Wave 1 cohort (N=1303) the attrition in pregnancy was higher than the recommendation (179, 14%), infancy just on target (258, 20%) and toddlerhood attrition lower than the predicted 10% (97, 7%) with the remaining clients having either completed the programme (547, 42%) or still active (222, 17%) (see Table 3.1). However some of this total group had children who were not yet 24 months so attrition in toddlerhood could change.

Table 3.1 Attrition by site for all Wave 1 clients, based on forms submitted by sites

Site	Total N	Left pregnancy N (%)	Left infancy N (%)	Left toddler-hood N (%)	Left, child 2 years N (%)	Active, child 2 years N (%)
1	118	22 (19)	13 (11)	14 (12)	27 (23)	42 (37)
2	111	10 (9)	8 (7)	6 (5)	68 (61)	19 (17)
3	190	42 (22)	31 (16)	12 (6)	87 (46)	18 (9)
4	153	25 (16)	38 (25)	7 (5)	65 (43)	18 (12)
5	123	15 (12)	22 (18)	8 (7)	57 (46)	21 (17)
6	100	16 (16)	31 (31)	14 (14)	32 (32)	7 (7)
7	112	14 (13)	25 (22)	7 (6)	58 (52)	8 (7)
8	133	8 (6)	38 (29)	9 (7)	50 (38)	28 (21)
9	139	12 (9)	34 (24)	14 (10)	45 (32)	34 (25)
10	124	15 (12)	18 (14)	6 (5)	58 (47)	27 (22)
Total	**1303**	**179 (14)**	**258 (20)**	**97 (7)**	**547 (42)**	**222(17)**

To more accurately reflect attrition through each of the three phases of the programme only those clients whose child had reached 24 months are included in the attrition figures in Table 3.2. Of these more than half (690/1177, 59%) had remained in the programme throughout all three phases and were graduates (47%) or still active (12%) making the overall attrition 41%, close to the guideline figure of 40% given by the USA national office. The toddlerhood attrition rate was marginally higher than that in Table 3.1, but still below the 10% limit.

While the overall rate of attrition combining all 10 Wave 1 sites is close to the fidelity objective, it can be seen in Tables 3.1 and 3.2 that there was considerable variability between sites. In site 2 they were able to retain more than three quarters of their clients though the entire programme (78%, see Table 2.10) while at the other extreme in site 6 only 40% remained. In this case the large number of clients leaving in infancy was related to the programme ending before all the clients had completed the programme and staff departures coming close together so not all clients could be accommodated by the remaining team members. The next lowest retention rate was 54% in site 3, where a greater percentage left in pregnancy than in any other site.

Table 3.2 Attrition by site for all Wave 1 clients whose child had/would have reached 24 months of age, based on forms submitted by sites

Site	Total N	Left pregnancy N (%)	Left infancy N (%)	Left toddler-hood N (%)	*Total attrition N (%)*	Left child 2 years N (%)	Active, child 2 years N (%)
1	102	17 (17)	11 (11)	14 (14)	*42 (41)*	27 (26)	33 (32)
2	107	10 (9)	8 (7)	6 (6)	*24 (22)*	68 (64)	15 (14)
3	187	42 (23)	31 (17)	12 (6)	*85 (46)*	87 (46)	15 (8)
4	147	23 (16)	36 (24)	7 (5)	*66 (45)*	65 (44)	16 (11)
5	107	13 (12)	20 (19)	8 (8)	*41 (38)*	57 (53)	9 (8)
6	98	16 (16)	29 (30)	14 (14)	*59 (60)*	32 (33)	7 (7)
7	96	10 (10)	20 (21)	6 (6)	*36 (38)*	58 (61)	2 (2)
8	123	7 (5)	38 (31)	5 (4)	*50 (41)*	50 (41)	23 (19)
9	110	5 (4)	32 (29)	12 (11)	*49 (45)*	45 (41)	16 (15)
10	100	15 (15)	15 (15)	5 (5)	*35 (35)*	58 (58)	7 (7)
All	**1177**	**158 (13)**	**240 (20)**	**89 (8)**	***487 (41)***	**547 (47)**	**143 (12)**

3.2 The main reasons for leaving the programme

Some reasons are basically unrelated to the programme such as clients moving away from the area; others are linked to client behaviour such as missing many appointments or 'vanishing from the radar' by not being home and not answering telephone calls or texts, some are medical – miscarriage, termination, stillbirth, child death or more unusually maternal death – and visits may stop if the child is no longer in the mother's custody either through adoption or through being made the responsibility of social services. Finally some clients indicate to their FN that they no longer wish to receive the programme, giving one of a number of reasons for declining.

Table 3.3 Reasons for leaving as recorded by FNs

Reason for leaving	N	% of total N=1303	% of leavers N=534
Still active	222	17	-
Graduated from FNP, child 24 months	547	42	-
Declined further participation in FNP	230	18	43
Moved out of the programme area	104	8	20
Excessive missed appointments	83	6	16
FN unable to locate client	37	3	7
Child no longer in family custody	29	2	5
Foetal death (miscarriage or termination)	19	1	4
Child death	4	.3	.7
Still birth	3	.2	.6
Maternal death	1	.1	.2
Other	24	2	4

Almost half of the leavers indicated to their nurse that they wished to stop the programme rather than just disappearing without trace (see Table 3.3). Of these some simply said that they did not wish to continue (14% of decliners, 6% of leavers) but the most frequent reason for declining, given by more than one third, was that they considered their needs had been satisfied by the programme or that they now had sufficient support or knowledge (36% of decliners, 15% of leavers; see Table 3.4). Smaller numbers indicated that they were not satisfied with the programme, that they did not want a new Family Nurse after their own nurse had left, or that they had been persuaded by family members that they did not need the FNP. Only a small number, 22 of the 1303 (4% of leavers), left FNP saying that their return to education or work left them with no time for the visits.

Table 3.4 Reasons for declining further involvement with FNP (N=230)

Reason	N	% of total N=1303	% of leavers N=534	% of decliners N=230
Client's needs satisfied	82	6	15	36
Does not wish to remain in FNP	32	3	6	14
Has sufficient knowledge or support	20	2	4	9
Dissatisfied with the programme	20	2	4	9
Refused new Family Nurse	18	1	3	8
Pressure from family members	16	1	3	7
No time, returned to work	13	1	2	6
No time, returned to education	9	0.7	2	4
No time	9	0.7	2	4
Services from other programme	6	0.5	1	3
No details given	5	0.4	1	2

Reasons for leaving by phase

Some reasons for leaving are by definition limited to particular phases of the programme (e.g. foetal death to pregnancy; child no longer with family to infancy or toddlerhood) but most could occur at any point with no particular variation between pregnancy, infancy and toddlerhood(see Table 3.5). However, looking in more detail at those who actively declined the programme (see Table 3.6) almost half of those declining in infancy also said that their needs had been satisfied, while this was less likely to be the reason for declining in either pregnancy or toddlerhood.

The number declining in toddlerhood is small (37) so percentages based on that figure need to be interpreted cautiously, but while some decliners in toddlerhood said that their needs were satisfied they were as or more likely just to say that they did not want to be in the programme any longer or that they did not want a new nurse, understandable after the long time that they would have been with their original nurse through pregnancy and infancy.

Clients moving away represented a similar proportion across each phase but leaving after excessive missed appointments was least likely to be a reason for leaving in toddlerhood (see Table 3.5). Presumably clients who remained involved until that stage were the most likely to perceive benefits from the service and consequently tried to be at home at the appointed times. Those that were unable to be located represented a similar proportion across all three phases. The number of children removed from the family was small and did not differ between infancy and toddlerhood in terms of the proportion of leavers (see Table 3.5).

Table 3.5 Reason for leaving by phase of the programme (percentages in brackets are the proportion of those leaving in that phase)

Reason for leaving FNP	Pregnancy N=179	Infancy N=258	Toddlerhood N=97
Declined further participation in FNP	89 (50)	104 (40)	37 (38)
Moved out of the programme area	33 (18)	50 (19)	21 (22)
Excessive missed appointments	26 (15)	46 (18)	11 (11)
FN unable to locate client	13 (7)	16 (6)	8 (8)
Child no longer in family custody	0	19 (7)	10 (10)
Foetal death (miscarriage, termination)	17 (10)	2 (1)	0
Child death	0	3 (1)	1 (1)
Still birth	0	3 (1)	0
Maternal death	0	0	1 (1)
Other	1 (1)	15 (6)	8 (8)

Table 3.6 Reason for declining further FNP by phase of the programme (percentages in brackets are the proportion of those declining in that phase)

Reason for declining FNP	Pregnancy N=89	Infancy N=104	Toddlerhood N=37
Client's needs satisfied by the programme	25 (28)	50 (48)	7 (19)
Does not wish to remain in FNP	12 (14)	11 (10)	9 (24)
Has sufficient knowledge or support	13 (15)	5 (5)	2 (5)
Dissatisfied with the programme	10 (11)	8 (8)	2 (5)
Refused new Family Nurse	4 (5)	6 (6)	8 (22)
Pressure from family members	11 (12)	5 (5)	0
No time, returned to work	3 (3)	5 (5)	5 (14)
No time, returned to education	1 (1)	7 (7)	1 (3)
No time	5 (6)	2 (2)	2 (5)
Receiving services from other programme	3 (3)	3 (3)	0
No details	2 (2)	2 (2)	1 (3)

An attempt was made by the research team to contact and interview at least 10% of toddlerhood leavers (9 of the 89) but it was possible to reach only seven of them ranging in age from 17 to 21. For many, by the time the site submitted a data form to indicate that they had left, their contact details were no longer current, or they were not available to talk on the telephone. Those interviewed did however represented the main reasons for leaving (moved away, back to work, back to college, just too busy, did not want visits any more, did not like their new nurse, and left after their first FN left having learnt enough). In common with a small number from the total group of leavers the one client who objected to her FN did so after social services had been involved following contact from the FN. Only two reported that the materials were related to their decision to leave (too much paperwork, nothing new to learn). All those interviewed indicated that they had found the visits useful. Not surprisingly some indicated that they had found the programme most useful in the pregnancy phase, or early in their child's life:

They were useful in pregnancy but visits could be difficult with my child present.
It was most useful when I was pregnant as my FN explained the stages of pregnancy.
The visits were useful most of time as they saved me a trip to my GP for weighing my baby.

When asked if they could give advice to help clients remain with the programme most did not have any suggestions but one indicated that less paperwork would help and another that fewer visits would have made a difference.

Site differences in reasons for leaving

It was evident that attrition differed between sites (see Table 3.2) and there was some site variation in the reasons for leaving the programme. One could argue that a client telling their FN that they wished to finish with visits is indicative of a more trusting or close relationship than simply not being home on the appointed days or not answering calls, texts or letters. Site 2 had the lowest level of attrition and the majority (63%) of those leaving did tell their FN directly with only one client recorded as a leaver due to failure to contact her (see Table 3.7).

Table 3.7 Main reasons for leaving by site

Site	N	Decline	Move	No contact[5]	Death[6]	Lose custody	Other
1	49	23 (47)	8 (16)	10 (20)	4 (8)	4 (8)	0
2	24	15 (63)	5 (21)	1(4)	1 (4)	2 (8)	0
3	85	36 (42)	11 (13)	28 (33)	4 (5)	6 (7)	0
4	70	34 (49)	15 (21)	14 (20)	3 (4)	4 (6)	0
5	45	21 (47)	15 (33)	4 (9)	3 (7)	2 (4)	0
6	61	21 (34)	9 (15)	6 (10)	1(2)	1 (2)	23[7] (38)
7	46	18 (39)	8 (17)	12 (26)	3 (7)	4 (9)	1 (2)
8	55	19 (35)	14 (25)	14 (25)	5 (9)	3 (5)	0
9	60	23 (38)	12 (12)	21 (35)	2 (3)	2 (3)	0
10	39	20 (51)	7 (18)	10 (26)	1 (3)	1 (3)	0
All	**534**	**230 (43)**	**104 (19)**	**120 (22)**	**27 (5)**	**29 (5)**	**24 (4)**

In contrast in sites 3 and 9, with rates of attrition among the highest and both above the target of 40% (see Table 3.2), only just over a third of leavers told their FN that they wished to stop having visits while almost as many left after they became uncontactable. Leaving with no contact was also high in sites 7, 8 and 10 (see Table 3.7). Site 5 had the most mobile population in that a third of their leavers were known to have moved out of the area while the population in site 3 appears stable in that movers represented only 13% of their leavers (see Table 3.7). Only in site 6 were there leavers who could not be accommodated by the programme. Normally, when an FN leaves, if her replacement cannot start immediately then the other FNs in the site temporarily take on the clients. However in this case two staff members left within a short time and it was not possible to replace both of them or to accommodate the clients from the existing team since a decision had been made that the programme would no longer be made available in that area.

[5] Combining 'unable to locate' and 'excessive missed appointments'
[6] Combining 'foetal death', 'still birth', 'child death' and 'maternal death'
[7] All related to staffing departures in the site and subsequent lack of capacity

3.3 Characteristics of clients who leave the programme

Client characteristics at enrolment were examined to see if there were any factors that differentiated between those clients who subsequently left the programme during pregnancy, infancy or toddlerhood. To make the most robust comparisons, the analyses include only those clients whose children are at least 24 months old and therefore would have competed the programme if they had remained engaged (N=1177). Clients still 'active' when their child was 24 months have been put together with clients for whom graduation status had been confirmed by their FN submitting a leave of status form indicating 'child has reached second birthday' to create one 'non-leaver' group so that any delay in graduating has no impact on the comparisons.

Age
The mean age at recruitment did not differentiate between leavers in pregnancy, infancy or toddlerhood and non-leavers (see Table 3.8) nor did age group (see Table 3.9).

Gestation
Those who left the programme during pregnancy were enrolled at a significantly earlier stage of their pregnancy than those who left subsequently, or did not leave at all (see Table 3.8).

Household and family structure
The number of other adults in the household did not distinguish significantly between leavers in any phase and non-leavers (see Table 3.8) nor did marital status or who else lived in the client's household at intake (see Table 3.9).

Ethnic group
There was a significant effect of ethnic group in that those described as black were less likely to have left than other ethnic groups, particularly evident in pregnancy (see Table 3.9).

Education and employment
Whether or not clients had any GCSEs was unrelated to leaver status (see Table 3.8) and neither was the total number of GCSEs at intake (see Table 3.8). Lifetime employment and employment status at intake were also unrelated to leaver status (see Table 3.9).

Table 3.8 Comparison characteristics at enrolment by leaver status, continuous factors, for clients with children who are/would have been at least 24 months old (N=1177)

	Pregnancy leaver N=158	Infancy leaver N=240	Toddler leaver N=89	Non leaver N=690
Mean age (years)	18.2	18.1	18.3	18.2
Mean gestation (weeks)	15.9*	18.5	19.0	17.9
Mean people in the household	2.5	2.5	2.8	2.7
Mean GCSEs	4.3	3.9	4.2	4.3
Mean GCSEs, A*-C	2.6	1.9	2.2	2.2

* pregnancy leavers significantly lower than other groups at $p<0.05$

Table 3.9 Comparison of characteristics at enrolment by leaver status, categorical factors, for clients with children who are/would have been at least 24 months old (N=1177)

		Pregnancy leaver	Infancy leaver	Toddler leaver	Non leaver
Age group	13 to 15	11(17)	10 (16)	5 (8)	38 (59)
	16 to 17	48 (13)	78 (21)	23 (6)	223 (60)
	18 to 19	72 (14)	109 (21)	41 (8)	289 (57)
	20 to 24	27 (12)	43 (19)	20 (9)	140 (61)
Marital status	Single	70 (9)	155 (20)	64 (8)	500 (64)
	Cohabiting	21 (10)	50 (24)	11 (5)	127 (61)
	Married	5 (6)	16 (19)	11 (13)	54 (63)
Household members	Own mother	38 (9)	79 (18)	37 (8)	293 (65)
	Own mother plus partner	10 (10)	14 (14)	7 (7)	67 (67)
	Partner only	14 (8)	38 (22)	14 (8)	106 (62)
	Partner & others	7 (7)	28 (28)	11 (11)	55 (55)
	Other adults	11 (12)	21 (23)	5 (6)	54 (59)
	Alone	6 (6)	24 (25)	9 (9)	57 (59)
	Shelter/homeless	11 (14)	17 (22)	3 (4)	48 (61)
Ethnic group*	White	85 (10)	177 (21)	66 (8)	530 (62)
	Black	1 (1)	13 (15)	6 (7)	65 (77)
	Asian	5 (7)	14 (20)	9 (13)	43 (60)
	Mixed/Other	6 (8)	17 (24)	5 (7)	43 (61)
GCSE	Any	62 (9)	136 (19)	57 (8)	472 (65)
	None	35 (10)	85 (24)	29 (8)	209 (58)
Ever employed	Yes	62 (10)	121(20)	46 (8)	374 (62)
	No	33 (7)	96 (20)	39 (8)	303 (64)
Employed at intake	Full-time	15 (13)	17 (15)	7 (6)	74 (66)
	Part-time	14 (12)	19 (16)	9 (7)	80 (66)
	No	33 (9)	83 (23)	30 (8)	219 (60)
	Never	33 (7)	96 (20)	39 (8)	303 (64)

* Black vs. all other clients, Chi Square 10.23, 3 df, p = .02

Total vulnerabilities

Attrition was examined in relation to the number of vulnerabilities identified at intake and there was a non-significant trend for a relationship between them (Chi Square 15.61, p = .08); those with many or no vulnerabilities were the least likely to leave in pregnancy and clients with no intake vulnerabilities were the most likely to stay throughout the entire programme (see Table 3.10).

Table 3.10 Attrition by phase and the number of vulnerabilities identified at intake (complete data for at least 6 of 8 vulnerabilities, N=1063)

	None N=140	1 or 2 N=595	3 or 4 N=276	5 to 7 N=52
Leaver, pregnancy	6 (4)	55 (9)	22 (8)	2 (4)
Leaver, infancy	18 (13)	118 (20)	64 (23)	12 (23)
Leaver, toddlerhood	9 (7)	46 (8)	26 (9)	5 (10)
Non-leaver	107 (76)	376 (63)	164 (59)	33 (63)

Behaviour during visits

While the demographic characteristics of clients at intake appeared to be unrelated to whether or not they subsequently left the FNP, the nature of their behaviour during visits, and that of their partners, did show many variations. The length of time that a nurse stays in the home will be related in part to how well the client is responding and their interest in the materials. The average visit length for clients who left during pregnancy was significantly shorter than that of those who left in infancy or did not leave at all. There was an overall effect of the amount of content covered depending of when and whether clients left, but no group was significantly different to any other group with no clear pattern to the values (see Table 3.11).

Client involvement is rated on a scale ranging from 1 to 5 after each visit and those clients who did not leave had the highest average involvement (see Table 3.11), significantly higher than that given for those leaving in infancy. Their understanding was also the highest and the extent to which they had conflict with the materials lowest, both mean scores for non-leavers significantly different from leavers in pregnancy and infancy. The pattern is similar with respect to toddlerhood leavers but due to the smaller group size the differences are not significant (see Table 3.11). When partners are present their behaviour is also rated on the same scales. Their behaviour was less likely to differ depending on whether the client subsequently left the programme, but there was a tendency for partners of mothers who left in toddlerhood or who remained throughout to show more understanding than partners of clients who left in pregnancy or infancy (see Table 3.10).

Table 3.11 Mean characteristics and Family Nurse ratings in relation to leaver status, for all visits made to clients whose children are/would have been at least 24 months old (N=1177)

Mean value	Pregnancy leaver N=158	Infancy leaver N=240	Toddler leaver N=89	Non leaver N=690
Duration of visits***	68.2	74.8	71.5	75.0
% of planned content covered*	94.2	92.2	91.6	93.6
Client involvement ***	4.6	4.5	4.6	4.7
Client understanding ***	4.4	4.3	4.4	4.6
Client conflict with materials ***	1.2	1.2	1.2	1.1
Partner involvement	3.8	3.7	3.8	3.8
Partner understanding *	3.8	3.9	4.1	4.1
Partner conflict with materials **	1.2	1.3	1.2	1.1

* Significant main effect of group comparison at p<.05

** Significant main effect of group comparison at p<.01

*** Significant main effect of group comparison at p<.001

3.4 Family Nurses' views about attrition

By the toddlerhood stage the relationship between FN and mother is based on a considerable amount of time spent together and with the child. Examined from this angle alone, and without attention to what is actually being done with the time together, the relationship is cumulative, based on previous shared experience (in pregnancy and infancy) and informed by mutual knowledge and understanding of each other and of the child. The benefits of depth and consistency in relationships between practitioners and parents are recognised in the recommendations for improvements in practice in many health and social care programmes: 'keyworker' and 'continuity of care' are regularly recommended (see, for example DoH 2001 recommendations for work with families where children have special needs; and DoH 1993 recommendations for midwifery practice*).* FNP, by centralising the one-to-one relationship between mother and Family Nurse, makes this ingredient a non-negotiable part of the process.

At the toddler stage FNs continue to report that the one-to-one relationship with clients sustained their enthusiasm and energy, that they 'like' their clients and that the shared experience acts as a bond between them:

> *"It has been fabulous to watch them move from being pregnant to having their own child – really good."*

Asked what keeps clients in the programme, all FNs interviewed cited the relationship between them first:

> *"Why do they stay? They like us and we respect them and we are strength-focused and they like the attractive activities…"*
>
> *"They stay because of continuity and their relationship with you."*

The fact that this approach may be unusual for clients was also mentioned:

> *"They feel it is non-judgemental and non-threatening in contrast to their previous experience of services."*

Another FN described how a client with whom she was already involved had assumed that she would act in the same way as a social worker.

> *"I explained clearly all the different roles. It was then she could trust me, I think. They get stories told by family members about the Police and Social Services."*

They noted also that the relationship required considerable personal investment and that this contributed to the pressure some feel in the Family Nurse role. Given the small case-load carried by a Family Nurse the assumption by outsiders is likely to be that the job will be less pressured than that of practitioners in health and social care who carry very much larger loads. Almost all FNs noted that the nature of the relationship meant that they developed concerns and anxieties about their clients because they knew so much about them, and that they acquired a feeling of responsibility for them which persisted beyond working hours, but which was linked with limiting attrition in that the relationship developed into a close and caring one:

> *"On a personal level it has been very telling on us and our own families actually. It has taken a huge amount out of me personally. It has reflected in my own family life – you know, the balance isn't right. That has perhaps been our own worst enemy: we left our phones on…Because we felt it was very important to build this relationship with these girls and I think we just took it a little far in the hope that we would keep them, because it was very important that we kept them."*

However, the very closeness of the relationship can make it easier for mothers to excuse themselves from visits, or to break appointments. The fact that the FN has such detailed knowledge of the mother's life means that explanations, often by text message, may be brief, since the FN is already familiar with the situation. For example, an FN described how one mother, who not there when she calls, explained this by saying:

> *"Oh, it is just my life-style: I forget you are coming."*

Family Nurses reported that in these circumstances they continued to turn up on a regular basis and show an interest in the hope that the mother's engagement could be re-ignited. Not giving-up is an aspect of the role-modelling approach used by this intervention: it demonstrates an aspect of the mother-child relationship for clients to copy. In situations like this FNs report that they walk a delicate line between keeping channels of communication open and being seen as a nuisance:

> *"We send a note every month and a bit of an update on what's going on, saying 'If you want to get in touch then do.' So they are not thinking 'Oh no, it's another note from them!"*

These efforts at retention have been similar throughout the programme, but there are some signs that new pressures arise for mothers during toddlerhood. Although this was rarely given as a reason for declining to be involved with FNP any longer, according to the FNs clients returning to education happens more frequently at this stage, which places extra pressure on the FN to arrange visits when the client is free.

> *"Nearly all the Mums are at college. I am a victim of my own success – you get them into college and then you can't see them!"*

In fact, most FNs *do* continue to see many mothers who are studying, but they observe that finding the time for visits has become more difficult and that mothers are frequently tired.

Similarly if the client is in employment or has other activities once her child is a toddler then they become less available. FNs pointed out that the kinds of employment that many of their clients have does not allow for any flexibility to be available for visits:

> *"The ones that have been working tend to be in quite low-paid jobs and the expectation from their employers is that they will work quite long hours. Sometimes they have been asked to go into work and have had to cancel visits, the employers aren't understanding."*

From the quantitative data it was seen that clients sometimes indicated that they had gained sufficient from the programme and no longer needed to be visited. This was in fact more typical of those leaving in infancy but did continue into toddlerhood (see Table 3.5). FNs noted that it is often the more able mothers who could begin to find the programme repetitive and no longer offering them anything:

> *"They feel they've had enough and can manage."*

They reported that the less able clients left for different reasons, for example those with chaotic lifestyles felt overwhelmed by the need to arrange regular visits:

> *"They say 'I don't want you' or they just disappear and you can't track them down."*

Nurses try to keep in touch, as reported above, but in some cases it is clear that the mother is not accessing the programme and has decided not to participate any more.

If a child is taken into the care system, if a permanent care order is made then generally the FNP visits will stop although they may continue either separately to mother and child or together as part of a supervised care order. FNs were liable to blame themselves when a permanent care order was made. In one case where a child was removed from a violent

mother the FN said that she had felt delivering the programme would mean that a child would not be in this situation but that in hindsight she thought she had been naïve. Other cases had involved abuse of children, putting FNs in the difficult position of deciding where support for the parent had to end, in the interests of the child. Some clients were said to have left because a referral had been made to social services, even if the child was not taken into care. Some FNs observed that difficulties of this sort were occurring more at the toddler stage:

> *"All these problems seem to be appearing. Domestic violence; one child, on the 'At Risk' register, has been in foster care and is now living with the father…the FNP programme gets pushed aside because there is always something that needs addressing."*

Other factors beyond the relationship between nurse and client or their involvement in other activities that can lead to attrition, but FNs use the 'special relationship' to combat them where they can. If clients have been retained until toddlerhood then there is sufficient shared history for them to re-engage with a client who temporarily goes 'off the radar' which happened in the following example:

> *"You have to be tenacious when the girls are not in or not available. One girl just went off, I didn't see her for two months. We had a good relationship. I wrote her a letter. I said I was sure she had a good reason why she didn't get back to me, I was still interested if she wanted. She did get back to me. She had split up from her partner and she felt raw and she retreated into herself…It messes up your fidelity* (the number of expected visits made) *but she was back!"*

Other nurses described putting in extra effort of this and other sorts which would seem to be beyond the call of duty in much practice. The reason they think it is worth doing so is the relationship.

Other matters which were considered significant in retaining clients on the programme included their enjoyment of the activities, observation of their child's development, and 'the feeling of being special'. In the latter case a comparison was made with the attention that first wave FNs themselves had received because they were pioneering a new programme. They felt that the mothers were getting a comparative charge as the pioneer clients.

3.5 Conclusions

Attrition in toddlerhood was generally low so that the overall rate for the whole programme was close to the recommendation from the USA that it should not exceed 40%. However it should be noted that, while toddlerhood attrition was only 7%, a further 3% of 'active' clients received no visits and 1% less than 10% of visits. Thus the real attrition in toddlerhood may be closer to 10%.

It is encouraging that the majority of leavers actively declined the programme suggesting that they both had some confidence to explain their needs and a good enough relationship with their FN to be able to do so. In the site with the best delivery overall almost all those who left did so after telling their FN, much more satisfactory than becoming elusive. The FNs themselves pinpointed the relationship with the client as a factor that reduced the likelihood of attrition. Few of these decliners were negative about the programme or the FN, most felt that they had made good progress and could now cope independently. FNs also noted that progress such as gaining employment or studying could increase the likelihood of a client leaving. However a small number of clients were unhappy about social service

involvement following intervention from the FN and this is likely to be an ongoing issue for supervision.

Client characteristics were largely unrelated to attrition in toddlerhood. Clients of black ethnic background were the least likely to leave overall but most of the difference occurred in pregnancy or infancy. However FNs were able to detect a difference in the behaviour (involvement and understanding) of clients who subsequently left, as they did in infancy. This should be a useful message for later sites, that their ratings – possibly completed using more of the 1 to 5 scale – will be useful in identifying clients that may be likely to leave, so that they can work with them to reduce the likelihood.

Chapter 4. Acceptability in Toddlerhood

4.1 Balancing progress and fidelity

Describing their experience of delivering the toddlerhood stage of FNP, FNs outlined a programme that has an onward dynamic – as the child grows - but which also moves in other directions. At this stage some of these are external, as attention shifts to the mother's trajectory into education, work and life without FNP. At the same time there is activity outside the home and beyond the mother-child relationship which impinges upon it and affects the delivery of FNP. The Family Nurse tries to hold all this in equilibrium.

The child is now providing visible evidence of the work that the FN and the parent have been doing together:

> *"Yes, they are always there. It is marvellous, and they quite enjoy looking in the bag to see what I have brought that week when you visit them. It is very enjoyable, as you know you are near the end of the programme and it has been wonderful to watch them develop."*

FNs also described feelings of pride and sometimes surprise at observing the mother and child together.

> *"To see where they've come from and how they've developed!"*
>
> *"I have been very aware of really trying to role model and highlight the strengths and commenting when it was appropriate to comment on the child interaction. Really it is using it* (the presence of a toddler) *as a working opportunity."*

By toddlerhood mothers are very familiar with the methods of FNP as well as having an established relationship with the FN. The FN herself is experienced with aspects of the programme like the domains, and the proportion of time to be spent on them. FNs describe this familiarity as making them more comfortable with practising the programme and more trusting about the programme and their own capacity to deliver it. Some describe their own confidence in the programme methods and -materials as having grown with use.

> *"I am always amazed at how well-researched it is: the mum will be talking about problems she is having with toddler tantrums and, sure enough, in the pack is toddler tantrums. It is just amazing that the material fits the age of the child."*

4.2 Programme Materials

There is a consensus that the enhancement of the programme materials used at the toddlerhood stage has made it easier to engage clients. The new version has been updated, the language has been 'anglicised' and the materials have been re-designed and printed in colour.

> *"The major change – we were using black and white facilitators and now we are using colour – and they absolutely love them. I have found they are filling them in more and are more responsive."*

Most FNs expressed enthusiasm for the new materials, but there were some exceptions, including a nurse who felt that there were appropriate materials available from other existing sources like parenting programmes, and who would have preferred to put together materials herself. Some comments about delivery of sessions suggested that could be difficult to cover all the materials and to get clients to complete the full curriculum with fidelity, that there was too much content in toddlerhood.

There were also observations specifically about the difficulties of getting clients to complete paperwork. This has been a continual concern through the previous stages of FNP and was proving just as acute at the toddler stage for some FNs. For example FNs were divided about the tool known as 'My Toddler and I', some liking it as resource:

> *"It is actually a very nice comprehensive rich sort of looking back over the last couple of years and looking forward at the same time."*

Others were less enthusiastic, indicating that this activity was very time-consuming, and meant that other aspects of the programme had had to be curtailed.

> *"I can't bear 'My Toddler and I'. I've done that with several girls of different capabilities and none of them have really enjoyed it; I've ended up putting words in their mouths. One of the girls said 'I'm not very good at this, am I?' One of my very bright girls…she said 'It's horrible, I don't understand it.'"*

Two tools used at the toddlerhood stage, the 'Ages and Stages' questionnaire and the 'Language Measure' were investigated in the interviews with FNs. The former, which also has versions for younger infants, was generally seen as useful. Most FNs reported that clients liked it, since it gave them a baseline measure for their child's development. FNs themselves also liked the fact that it worked as an incentive for mothers to play and read with their child.

> *"When it is in front of them that this is what we would expect of a child of this age they think 'Oh dear, perhaps we should be doing a bit more'."*

Some FNs thought that this questionnaire was administered too many times (at 4, 10, 14 and 20 months for development and at 6, 12, 18 and 24 months for social-emotional behaviour – see Chapter 5 for more details) and became repetitive for clients, who themselves remarked on the fact: *"Are we doing that again?"* These respondents felt that, in an effort to reduce the paperwork, the number of times Ages and Stages was administered should be reviewed.

In contrast the 'Language Measure' (a reduced version of the MacArthur CDI developed for use in Sure Start; Harris, Law & Roy, 2005; Roy, Kersley & Law, 2005), designed to be used with FNP clients only once at 21 months, was universally disliked. FNs considered that it made mothers anxious when their child was unable to name the words on the list and gave them the impression the child was 'failing'. FNs felt the measure did not promote success:

> *"I really don't like it. Most toddlers don't use the words they have on the sheet so the client feels as though the child is failing. So I say to them first, let's talk about some of the words baby is saying. Then I can say 'See, baby is saying so much'…so it's reassuring the mum."*

Some FNs commented (despite it being a version adapted for use in England in Sure Start programmes) that the words in the measure were American and were not familiar words in everyday English usage. Others had found it particularly difficult to administer with families where English was a second language, who could become concerned that their child was not achieving. On the positive side some FNs said that they could use the measure for referral, and some noted that it was useful to be able to do this early, at 21 months. But many FNs had had wide previous experience of making developmental assessments when they were health visitors and had a range of informed comment about the measure and its timing:

> *"Two is a difficult age to assess language. Many of my clients will not pass this assessment with all those clear words, but they will have plenty of jargon, comprehension, their processing and understanding of language is good."*

4.3 Factors affecting delivery

The toddler

Several reasons were cited for difficulties in delivering all the planned content. The most common was the presence of the toddler in the room. While from the start some visits have been complicated by the presence of other family members or visitors, the presence of the client's toddler presented ongoing issues since it was generally desirable to have them in the room. FNs noted logistical difficulties in managing their belongings, programme materials and eye-to-eye contact with mothers when toddlers were there, wanting to be involved. Taking toys and equipment with which to divert the child while talking to the mother was a common strategy although not always successful, in part due to the programme's successful focus on maternal sensitivity:

> *"You are trying to talk to the mum with your bag behind your back and your papers pinned down but they (toddlers) are very quick, as soon as you put something down they grab it. You have been saying all the way through the programme that the mother should be attentive to the child and not ignore them and now you are there desperately trying to get her attention, asking questions."*

However, it is possible in these circumstances for FNs to observe at first hand the mother's management of the child. One noted this from a recent visit:

> *"The mum had the daughter on her little chair and she had some crayons. She was doing her stuff and we were doing our stuff…The mums I am seeing now take responsibility for keeping their children entertained."*

Several FNs pointed out that good practice by mothers at the toddler stage could be attributed to their assimilation of FNP materials from the infancy stage. When mothers were having difficulties dividing their attention between the FN and their toddler it could be because earlier lessons had not been fully integrated into their repertoire, which provided important information for the FN when planning other activities.

Other activities

There were also growing external demands on mothers at the toddler stage which could make it difficult to deliver the expected number of visits. These might represent progress and a positive impact of previous visits, like taking up courses in further education, being at work, seeing other professionals, visiting children's centres.

> *"A lot of the clients are in college or work. It is a major challenge trying to fit this round the fidelity of the programme and juggling it all. And when child and parent are tired, that can make it hard."*

There were also demands on clients from friendship groups and family. Some nurses reported that at this stage it was harder to arrange and confirm appointments with some mothers. An FN told of one mother who had participated in the programme when she was the only one of a set of friends to have a child, but since her friends have started to have children she has been putting the nurse off. Sometimes this has been because her child is with her own mother, at other times her friends have been at the house at the beginning of a visit and the mother has asked 'Can we cut it short?' All FNs note that they may have to use their ingenuity to get the mother's attention, and that they are more easily distracted when the children are at this stage.

Many FNs reported that in addition to potentially positive demands on clients' time they believed that crises were erupting in their lives more frequently in this third phase of the programme.

"Things come to a head in the last eighteen months: a lot of stuff starts happening for some of these families."

Domestic violence is mentioned most frequently, but housing clearly remains a problem in some areas. The following description, from an FN illustrates how such difficulties for her client affects her work:

"One client I visit is now in a refuge. She has a tiny room to herself; other space is shared with another family. She is about to go to court to give evidence on domestic violence so we need to talk in private. With little space for toys and a toddler it is a challenge to talk about really serious things that are distressing for her. So we were trying to talk and distract the little boy – you really have to adapt how you deliver in toddlerhood."

Crises

Crises may affect the ability of mothers to participate in the programme at all, and they may overwhelm the content of an individual session. Again, to illustrate how this happens, a nurse describes recent experience.

"Lately, I don't know why, there seem to be more problems coming in, so when you get there, before you've even started any of the programme, there are some issue that they want you to sort out. Maybe it's because they have all recently got their own flats, but it could be housing benefit or something else. You seem to be on the phone to these agencies because they have no credit. So they use your phone or you phone for them and try to explain for them because some of them find it really difficult to give an account of themselves. You are trying to negotiate things for them. That might take up to half an hour, three-quarters of an hour, before you have started the visit."

It appeared that pressure of this sort was more intense in the big urban sites, like London and Manchester.

As well as the pressure from crises, there could be an accumulation of difficulties for a family which run counter to the sense of progress built into FNP with its emphasis on the growth and development of the child. The following story shows how this can happen, and though it starts with the experience of the child's father, it is clear how this has affected the whole family.

"Whilst on the programme he (child's father) *has done his certificate for building sites but with the recession and the housing market he has not found work. When I last saw him he was having an interview for the army but when I last spoke to her she said he didn't get in. He is keen to work and provide for his family. At one point they did have a flat together but it was stressful financially and it was not a very nice flat, it was cold and damp. They ended up splitting up (not their relationship, just living apart), and going back to live with their mums. He does want to try and provide…the long-term goal is having a council house and living together as a family."*

It is clear from this account that the dynamic of the programme – onwards and upwards – can find itself colliding with the circumstances of the family.

New babies

Most FNs had experienced second pregnancies among their clients; some had several with second pregnancies on their case load, some of which are planned.

"We've got about six pregnancies and three I'm still visiting. This is what I find: when they get pregnant it is hard to get the visits in, they have hospital appointments or they get poorly or 'I didn't know you were coming'. This one, it was months and months and I didn't get to see her – I just had to call it a day. I sent letters, left notes through the door

saying 'Call me so that we can just meet up', or 'Let's just talk about how we can do this differently so that we can keep the visits going,' but nothing. I did try to extend it."

"They want their children about three years apart; that's perfectly reasonable, they don't want their children to be only children. We are trying to encourage them back into education and the bigger that gap, the harder it is."

Some FNs report that the second pregnancy and birth, if it occurs, can affect the delivery of programme sessions.

"You are obviously going to take on having a new baby around. During the last bit of pregnancy and after the birth they are very tired from having a new baby really. It is quite hard when they have the second baby and you go in there as a health visitor and there are certain things you have to do with the baby. They are concentrating on the baby and then you have to try and bring it back to the toddler. It is about getting them back to what the programme is about and into proper FNP. It definitely has an effect. You can get them back, but the first few months after having the baby it is all about health."

Mothers of a second baby may ask for the pregnancy phase of the programme to be repeated, but FNs explain and reiterate that this will not be possible, that they are providing the programme for the first pregnancy, but this can be difficult. Encouragingly many FNs note that mothers do retain the lessons of the pregnancy and infancy phases; for example

"Occasionally they will just check in that they are right in their thinking, some have actually got the file out again and looked back on the information and they have said they found it quite useful because they have been able to look at it, they haven't panicked."

Some also observe that with the arrival of a second child the mother may become more confident in what she does with her toddler. In one story a nurse described how the toddler was *"fine, but he was very much left to his own thing."* But that now the mother was going to 'stay and play' sessions with both children. The FN felt that this was a sign of increasing confidence and maturity in the mother, but also that *"Maybe it (FNP) all makes sense now on reflection."*

In most areas the FN is taking a health visitor role in relation to the new child.
This affects the way visits are carried out. There are two sets of notes for each visit.

"The mum will have concerns over the first child and the second, and you have to write prescriptions and it all adds up. You also have to do a primary visit and check on the baby, and that takes time from the programme. I tend to talk about the new baby first and their concerns, then I deliver the programme for the toddler. It is not a problem though."

But FNs were quite clear that they needed to balance the two roles, with the emphasis on the toddler.

"Of course you ask and talk about the baby but it is very evident that what you did for the first one is not being given to the second – you are not doing the PIPE on the second, just a bit of health visiting, you know – feeding."

And the following FN thought that the second child sometimes got short shrift:

"To be honest, you are not as interested in the second baby, you are so focussed on that first one you've been sort of studying for so long, and of course that's the one you are doing the programme on too. To the point where you sort of forget sometimes that you are still health visiting that second baby and you should be talking about weaning."

Despite the extra challenges and the balancing act required, the FNs were sufficiently experienced to manage the delivery of the programme to toddlers with the arrival of the new child in most situations. Indeed at times it had the benefit for the FNs of providing evidence that mothers had assimilated the work they had done with them on their first child.

4.4 Involvement of Fathers

The number of young fathers who were prepared to take part in the programme at the pregnancy and infancy stages has suggested a willingness among young men to be involved with young children which might indicate a cultural change or the impact of the encouragement received from FNs. Data in Chapter 2 show that there are still a substantial proportion of father who are involved at some point in toddlerhood visits. Where fathers had been involved from the start, some were still involved at the toddlerhood stage (especially if they were not in work or at college) but those who had never been involved at all were not described by FNs as becoming so in toddlerhood. As the previous example shows, an involved father's employment situation can have a profound effect on the family's well-being as well as the application of FNP.

Although the number was limited, most FNs could report at least one father who had started the programme and remained involved throughout, present more often than not for visits. For example, one father who had attended the graduation ceremony for FNP clients held at a local children's centre, is described by the FN as:

> *"Absolutely fantastic from the beginning…Some of the dads are really hard-working and focused on parenting and some of them are absent."*

However, where a new partner has come into the family, there have been few examples of successful participation in the programme, and more frequent are stories of difficulties. Another FN described how she found a new partner 'tricky':

> *"He has really put me on the spot once or twice when we have talked about equality in relationships….he really didn't like that discussion…It is all done within an environment of conflict between these two people, especially once the police are involved and I have had to do domestic abuse follow-up visits. It is as if he is coming along to see what we are talking about. I have arranged to see her on her own because of that."*

It is real-life situations like this around which FNP has to be fitted which put considerable onus on the skills of the Family Nurse concerned.

Although domestic abuse features on many case loads, FNs describe individual situations where they have been able to help. A nurse who heard of abuse from a social worker, talked about it with the couple concerned. The young man had become violent when drinking:

> *"We talked about what strategies he could use so that he never got into that situation again. He really worked on that, there has been an improvement there…Between them they seem to have thought it through, they seem united that there has not been any more violence."*

A more common experience for FNs is dealing with a family situation where the partner is controlling, (a circumstance which can be defined as domestic abuse when it includes financial and psychological control). One FN, who was very knowledgeable about domestic abuse, said she found it difficult:

> *"Listening to my girls and their domestic violence stories, because you want so much to say to them…get out. And of course you can't."*

Situations like these raise safeguarding questions and the extent to which they can be handled within the programme requires a fine judgement on the part of the Family Nurse.

Several FNs noted that they had referred fathers to other services – especially GP and mental health services - and one said that every father associated with her case-load had been in need of mental health support.

Some FNs considered that fathers who were involved became more so at the toddlerhood stage:

> *"I think a lot of the fathers love toddlerhood and some of the memos* (FNP Materials) *do point out the importance of the type of play the dad is providing – so in a way you can capture them again."*

Another agreed that there was increased involvement at this stage, but felt it had other roots:

> *"They are more pro-active with the children because we do a lot of the work with the girls with modelling, and what a child learns from how you behave with them. It is no good saying one thing to a child and doing the opposite. The girls take it on and discuss it with their partners. They have taken it on and see it as common sense."*

Other observations were that fathers were more involved in childcare as the child got older, because the mother had begun to study or to work; that lay-offs and redundancies in some areas were leading to more fathers being at home and able to be involved.

FNs tell stories of individual cases which do illustrate progress for young men, in their interest in the child, usually when it is their own, and in their growing understanding of and involvement in family life. The latter is an interesting by-product of the programme, with FNs providing a low-key relationship support service. The stories which demonstrate this function are rather long, but the following quotation gives a flavour of the sort of subtle attitude change that may be secured:

> *"This dad has stuck around and there were times when I thought he wouldn't. He would potter around* (during the visit) *and then the relationship grew with him as well. He would call on behalf of the client if they had to cancel. He was always there with her. I'd say 'Does he want to join in?' and the client would say 'Oh no, he's worse than useless.' Then I'd say, 'Every time I come he's either washing up or doing your bottles,' but it was like she couldn't accept the fact that he was helping. He matured and so did she."*

Another FN told of a young man in prison who completed the facilitators and was present for some visits when he was released. She compared his engagement favourably with the difficulties she had found engaging most young men.

FNs had a mixture of experiences in terms of involving fathers. Sometimes it occurred, more often it did not. There is an expression that many use when describing the amount of contact: they dip in and out. It is in the description of fathers that the complexity of life in some of these young families is revealed: young men in gangs, disability, domestic violence, being witness to murder, mental health problems. In such a difficult and inauspicious context an FN described talking about routines with a mother and her young partner:

> *"I spent four hours with them, and they were asking loads of questions. We were talking about routines; there was a bit of an argument going on about when to put the baby* (18 months) *to bed – they think half past eleven, so we discussed that at length and we talked about supporting each other, setting goals. So I am hoping that when I see them again that they have some sort of routine with the baby and with each other. And he said 'I really enjoyed that, I want to see you again'. So hopefully he will be there."*

4.5 Graduation from FNP

Managing separation

FNP is based upon a regular, continuous relationship between client and practitioner. This will usually be the same practitioner throughout the 2-3 year process. Although there are time-limited interventions with families elsewhere in the UK personal health and social care fields, there is no equivalent service that includes so much one-to-one contact, most of it in the client's home. This provides a basis for an intimacy which enables the practitioner to know the client and to understand her circumstances, and for the client to rely upon and trust the practitioner. When FNs talk about the 'therapeutic relationship' as central to the FNP process, this is what they mean.

There is a perennial question posed about all personal health and social care services: do users become dependent upon them? If they were not receiving support from these services, would clients become self-reliant and find their own sources of support? Do services disempower people? These questions were addressed by Beveridge when the welfare state was founded and have been dealt with more recently in this field in the DfES/HM Treasury Joint Policy Review on Children and Young People (see, for example, NSPCC 2006).

The design of FNP would seem to take account of these dangers. In the final six months of the programme the time between visits is extended. Materials are designed to introduce mothers to the eventual ending of the FN's visits and there are clear strategies and protocols for FNs to use in the run-up to their withdrawal. And one of the central elements of the programme, - the nurturing of self-efficacy in the mother – is geared to making young women ready for separation from the FN.

The comments of a minority of FNs about this part of the process were matter-of-fact. They felt that they and their clients had been clear about the date of the end of the programme and that the facilitators which prepared clients worked well:

> *"From the beginning we made it clear that it will end when the child reaches two. At 21 months we start talking about being independent and dropping them off to meet the health visitor and it is good – making sure they have everything they need."*
>
> *"I don't know if it's something to do with the testimonial, or getting them to complete 'Me and My Child', but I feel OK about letting them go."*

But some FNs did not feel that programme materials were effective at this stage:

> *"For the facilitators to remain the same until the very end is naïve and not appropriate for preparing them for the ending. There are facilitators that just don't seem to fit."*

Again, this was a minority viewpoint but it –portrayed a questioning of aspects of the programme which has been evident at other stages.

More common than complete confidence in the programme design and materials was a sense, from many nurses, that the time of ending should be varied, depending on the individual client and their circumstances.

> *"It varies from mother to mother – whether they are prepared for the ending or not."*

Some FNs thought that endings should be staggered according to the mother's situation, which it appears that they act upon in that many clients were visited beyond their child's second birthday (see Chapter 2):

"It would be good to be flexible with the visit patterns, based on the client's needs. For some clients there is too much going on and they are not ready to leave. You just need to get them back on an even keel."

There was even a sense that some FNs were engineering a situation where they would not have to hand clients over immediately. A supervisor said:

"One nurse came in and she's quite an organised person, she likes to do things well and she said 'I was supposed to be doing an ending yesterday and I bottled out…' When the mum said 'But I will see you won't I?' she said 'Oh well – maybe'."

FNs described how the last processes of the programme were taking more time than they had expected, with paperwork and the need to organise visits which might get postponed by the client. Several pointed out that it had been in toddlerhood where extra issues – domestic violence was noted in particular – were occurring and that they did not wish to leave the family before these had been resolved.

Two types of clients were cited as being most difficult to leave: those who had been in care and those who were disabled. Sometimes the FNs described this difficulty as resting with the client:

"It is the first time they have shared their stories with a professional – they are wondering what will happen next."

There were also suggestions, as we have seen, that FNs themselves were struggling to let go. Not many FNs said this about themselves – it was an observation made by supervisors or colleagues, in a generalised way. For example:

"Some of them (clients) *could be really dependent on their FNs. I suppose it depends on the FN as well, because people do like to be needed. It could be good and bad in this job – for the clients. I've found that once you go on to monthly visits they tend to get it: 'She's not going to be here all the time.'"*

Availability of other services

Many FNs mentioned the amount of paperwork the final few visits involved, especially when they were helping clients to become involved with other services in the community.

"It has taken more time than we had envisaged. The programme gets a bit forgotten when you are trying to do the last few visits. In fact, it's a bit disappointing because you are not doing it in the measured way you thought you'd be doing it."

In particular it involves writing testimonials and trying to summarise their stories and the progress that has been made from pregnancy up to their child's second birthday down on paper. Several FNs did not feel confident that their clients were going to get the support they needed in the future. And some nurses were candid about their own perfectionism – feeling that it was the handed-over clients who would somehow be the outward evidence of the effectiveness of FNP, and that they wanted their clients to be 'perfect'.

Clients are linked up with a range of other services such as nursery places, women's aid advice centres, refuges, Citizens Advice Bureau for debt issues, CAMHs teams and the volunteer support provided by Home-Start. In one site the FN team and the project leader were unequivocal in their belief that FNP needed to continue until the children were three and able to access a free nursery places.

"We knew for years in health visiting that small caseloads and long-term commitment to families was needed, but we couldn't do it. Now, with FNP, I still feel there is insufficient time to finish the job. Families should not be discharged until children are in nursery

full-time. The nurses don't want to leave them; the mothers don't want to leave the programme. It should carry on until 3 at least."

In other areas, although FNs were less explicit about wishing the programme might be longer, there were signs that they were not confident about the future unless children were able to access nursery places. Since then a national scheme has been introduced to provide a free part-time nursery place for all disadvantaged two-year olds, which should provide an important follow-on from FNP.

An adaptation of the programme has been attempted in another area, where a formal end is made to each stage: Pregnancy and Infancy as well as Toddlerhood. FNs give clients certificates and discuss endings at those points in the programme too:

> *"We then remind them of what the next bit will look like and start planning for that earlier on."*

The team in this area feels that this process will ease the final ending, making it seem *"more natural".* Such introductions might, however, be questioned in terms of 'fidelity' in that it may in fact increase the rate of attrition at earlier stages.

FNs have varied in the extent to which they mark graduation from the programme, and some vary the process according to the client:

> *"I don't make a big deal about ending, I just say 'Let's have a cream cake – wouldn't it be nice?' Some of them avoid you because they don't want it to happen. You are constantly chasing them to do that final visit. One mum called and asked if I can come to her 2 year olds birthday party and I thought that would be a nice way to do the last visit."*

Supervision with the psychologist has been helpful for FNs in coping with the separation:

> *"The psychologist has helped us to un-mesh these responses and feelings and some of us have found the clients are not grateful. We think we are not doing it right. The psychologist has helped with that."*

Nurses in one area noted that they had no budget for the final sessions and had to find things to do that cost as little as possible:

> *"It is things like going to the park and in the winter you can't do that in the freezing cold."*

Some signifier of the end of the programme is considered important by FNs. Where there is no ritual the separation is seen as painful – certainly for the FN herself. Some circumstances can be particularly difficult:

> *"I've had some very abrupt goodbyes which have been horrendous. Dear me, horrible things happened. One client, she went to prison…We had a case conference and of course the reports reflected this and it was so difficult to find any positives with her."*

In this case the child was removed from the mother and the FN felt that *"It wasn't how it's supposed to be."* More often, and more fittingly as far as the FN is concerned, graduation is a presented as a summit, marking the completion of a process and congratulating both parties for sticking with it.

In the UK there are universal and specialist services available so that mothers will not be without support when the FN departs at the two-year old stage. One of the jobs during the last visits is to set up relationships with support services which will continue with the mother once the FN has signed-off the relationship. Doing this is also time-consuming, adding to the pressures FNs feel when they are wrapping up a case.

> *"What I do is sit with the client and say 'This is what I am going to say about you to the health visitor. Is there anything that you don't want me to put in? Is there anything that*

you want me to add? So that they are in control of what's going on. It feels like a rush at the end."

'Handing over' the client to a health visitor

FNs have been delivering the Healthy Child Programme for their clients and ideally the FN makes a joint visit with the local health visitor who will be responsible for the departing client and her child in the future. In practical terms this can be difficult to arrange – FNs commented on the small numbers of health visitors in some areas and the tendency of appointments to breakdown. This is also the occasion on which FNP is seen in operation by a service with which it has been closely associated. (The majority of FNs have been health visitors). At this point in their experience FNs are able to articulate clearly the difference between FNP and health visiting practice. For example:

"I think as a health visitor sometimes you went in and you didn't know what you were going to deliver…if the mother is depressed you don't have a format to follow, you just go in and let the client guide you. But in FNP we have a structure. The girls are aware, their partners are aware of what we are going to deliver and that does work well. The materials are important but it is the way that you deliver that is more important."

Colleagues of this nurse noted that the positive attitude toward the client, based on agenda-matching, strength-based approaches and motivational interviewing was thrown into relief when set beside the approaches of other practitioners:

"You are always the one who is really upbeat and I think they are looking at you, the other professionals, and thinking there is this great collusion going on with the client."

Most FNs took considerable trouble with the hand-over, mainly because they were concerned that the client should continue to be well-supported. The most obvious problem was that health visitors were known to be over-stretched. In one site FNs described contacting health visitors personally before sending them the considerable updated paperwork on the client.

"When you have talked about the circumstances: 'This is what we are up to, this is what I need to do in the joint visit because these are the issues outstanding,' and I have not had a health visitor yet say no."

But FNs wondered if health visitors could continue to be sufficiently available for the needs of some of their clients. Where health visitors were already known to the FN team members, often because they had worked together in the past, and where they were based in children's centres, the handover tended to be most straight-forward. However, a significant proportion of FNs remained concerned about the level and quality of service their clients would continue to receive.

The Family Nurse process is on show in the joint visit with the health visitor. One FN said:

"There is a stranger there listening to all the information you have shared between you in all those visits. It is strange. There was one visit where the health visitor could not come and I felt we could speak a bit more freely, really."

And one nurse described how a health visitor observed that she, the FN, had behaved *'like a grandparent'* with the client she was handing over, and how she sensed there was disapproval of their close relationship. From the angle from which other professionals view FNP, the therapeutic relationship may appear to be dangerously boundary-less. FNs also observe that when they are advocating on behalf of their clients in case conferences, other practitioners assume that they are colluding with them.

"Often I am the only person with something positive to say."

FNs were anxious that other services saw their clients as individuals and appreciated *"how far they have come".* There remained a strong sense in these descriptions that continuing support services would not understand these clients, whom the FN had grown to understand well.

> *"The problem is, a lot of other services takes three strikes and you're out. This is not what you want to happen with these girls. You don't want them to slip through the net. There are a few significant challenges. Hopefully the health visitors will try and make contact – but they* (clients) *are difficult to get hold of – they change their phones."*

Some FNs acknowledged that they had expected at the outset that clients would not need the continued level of support that they felt some still did clearly need. They had encountered comments to this effect from health visitors. In one case an FNP manager had voiced a similar expectation: that they had expected FNP to solve the issues that some clients were continuing to present. This could put FNs in a difficult position and was one of the reasons they were anxious to emphasise how complex and deep-rooted were the difficulties with which a proportion of their clients were dealing. The attitude of some health visitors was that FNs were privileged in so many ways (case-loads, training, public profile were mentioned), the least they could do was present perfect outcomes.

Involvement with children's centres

Because children's centres are universally available (though with varied levels of service on offer), FNs have tried to link their clients with them at all stages of the programme. This can be complex since there will be many children's centres in the area covered by one FNP team, with clients spread over a large area. Thus FNs have needed to develop contacts in a number of settings unless they have a concentration of clients within a small area. In toddlerhood there were reports that some who had not wanted to use children's centre services began doing so. The usual reason was that the toddler himself or herself began to enjoy a stay-and-play or other experience at the Centre and that this encouraged a mother who had not wanted to use it before to go there. However, there were also continued reports that a proportion of young mothers were not using Centres (see also Chapter 5, Table 5.24).

The attitude of the children's centre itself played a role in encouraging use by these clients.

> *"A lot depends on what the Centre staff are like with them when they have arrived; it has helped that I can introduce them. But with some of them they still won't use the services because they don't see it's for them. So it's quite difficult sometimes to get them to see that people get a benefit out of it."*

It was depressing to hear that in some Centres, in some areas, staff had not been welcoming to the young mothers, especially given the amount of emphasis in their guidance on trying to involve this group. The lack of encouragement came from three angles:

1. A strong focus on younger mothers – While all have a common purpose, children's centres can vary in their focus. For example, some Centres focus on health services, others on day care services, others on midwifery services. . Young mothers often need extra effort to be reached for any of these types of support but particularly for those with a social component. They respond well to services that they consider relevant to themselves and to their children. Successful services quoted were often 'targeted' (e.g. a young mothers' group) and provided services the FNP mothers wanted – stay and play (i.e. social contact between mothers and activities for the children, with vocational courses alongside i.e. preparation for the training on which FNP had already been working).

2. The ambience of the Centre. This is quoted by many potential users of children's centres as being important in their decisions about whether to use a Centre or not. Some FNP clients felt the other users of centres were 'cliquey'. Underlying this concern is the sense that they are stigmatised because they are young mothers, a stigma that the FNP has striven to get beyond. However, in groups of community members it is likely that prejudices continue and that these are perceptible and familiar to the young mothers. *"It's full of women who our clients see as being really old, who are very middle class and have nothing in common with them."* This FN told a disturbing story of a group of childminders using a local authority play facility (not a children's centre) who actually prevented their children from playing with those of the young mothers who were attending with their Family Nurse.

3. The level of confidence of the client. To some degree the willingness to engage with a children's centre may be an indication of how far the client's confidence has developed through the FNP. *"The ones who have actively used the services have been more outgoing girls, quite prepared to join in and make themselves known and they engage well with centres."*

There is a gap in the seamless provision of ongoing support available to FNP graduates in some of the pilot areas. Where mothers are already in touch with a multi-agency support team, particularly where the child has special needs, FNs are reasonably confident about leaving them with the services available at the end of the programme. The main gap appears to be in the continuation of suitable preventive support, especially anything that continues to be offered in the home. The most effective children's centres are doing home visits with good supervision but this does not happen in all locations. One nurse described this need for her clients who were soon to graduate:

> *"I would like somebody to do outreach work with my girls and they* (children's centres) *won't do it because they can't go into the homes. They can only see them in the children's centres. It is ridiculous. They* (children's centre managers) *don't want them* (outreach workers) *to go into the houses; they don't want them to be vulnerable."*

While this is only one FN's experience and was not a widespread issue, it highlights the importance for FNP teams of working closely with Children's Centres, particularly at a time when resources in some Local Authorities may be stretched and decisions need to be made about the level of support offered to parents with young children. Where this is a concern one strategy for FNs might be to suggest to graduating FNP mothers that they link up with other FNP graduate so that they can accompany each-other to services such as play groups, increasing their confidence while also gaining important social support

Relationships with services other than children's centres are reported, and vary in the levels of collaboration which they offer FNP. However, the comments suggest that the amount of collaboration required has been reduced at the toddlerhood stage as compared to the previous stages of the programme. This is likely to be because some of the children over whom there was liaison have been taken into care; but there have also been some cases where children have been maintained in the family with FN support, and here, too, there appears to have been some reduction in social work liaison. Most FNs report a working relationship with social workers based on continued liaison over specific clients. The nature of the client need defines this relationship: it is as likely to be over a mother who is in the care system as it is to do with a safeguarding issue. Even where the relationship is established, FNs report an occasional disagreement or need to 'stand up' to social care:

"It has impacted on what I was trying to do, because they have got their agenda and if they are trying to say there are major concerns here – so I say 'Well actually I have known the family for a long time and it is manageable."

The comments about the relationship with other professionals, social workers in particular and sometimes with health visitors, highlight the strength and confidence of the Family Nurses. Sometimes they feel they are the only ally of the young mother, but many have been prepared to stand shoulder to shoulder with her. Several nurses observed that their clients had become more confident in their relationship with other services:

"They are more ready to take advice from professionals…I am not one who will take them by the hand, I will direct them to the place to go. It makes them more self-sufficient to go by themselves. And their knowledge, say of domestic violence, has made them more aware of the impact (on their child) *and not just on themselves."*

There remains a sense that some practitioners do not grasp the nature of the FN role, and that this is most likely to be difficult for practitioners from social care. The following story illustrates what can happen. The FN who told it prefaced it with the comment

"I don't know whether everybody in the multi-agency team understands what we are doing."

Her client was a very young mother from the looked-after system and she had been used to visiting this mother when she and her child had supervised contact.

"My reason for doing this was that I couldn't do my job properly as a Family Nurse unless I saw the mother and child interaction – and that was the only place that I could see the mother and child together because the child was living out of the borough and the mother went back to her own parents.. "

This FN explained to a social worker why she was visiting mother and baby:

"She said that I didn't have any right to visit that baby and she questioned my professional validity in visiting him."

Hearing nothing further, the nurse went to visit mother and child and was refused entry.

"We thought it was because they did not understand our professional role, but it was also very unprofessional because I would have been more than happy to tell her what the role was, if she had taken the trouble to ask, not just put a block on."

In this area, workshops about the programme had been held for multi-agency colleagues. The team explained that this was the only route they had to clarify the FNP role, but it appears, yet again, that there has been no steer from managers to front-line social care staff about the importance of collaboration with FNP.

Perceiving positive outcomes

Many nurses describe the sense of achievement and satisfaction they feel in looking at some of the mothers and toddlers they have worked with as they leave the programme. This strengthens the acceptability of their professional role as a Family Nurse:

"I have been completely amazed at the level (at) *which the children are functioning because, having worked as a health visitor previously, you get a feel for the groups of parents and how the children react – and speech and language has been amazing, the development, with the interactions; it really confirms that this way of working really does work with the parents. They really engage with the children and there is a lot more interplay with them and you see them developing really well."*

Where 'graduates' come together, for a final event or party, FNs are often struck by the assembly of children together, the quality of appearance, development level and behaviour. Experiences of this sort reinforce their faith in the programme. They sometimes comment, however, that other people, including multi-agency partners, may not appreciate just what

an achievement this has been, for the mothers and for the project: that the journey that the mothers and their children have undertaken will be invisible to outsiders, and that the significance of the input of FNP will not be grasped. As one Family Nurse put it:

> *"I've found one of the most traumatic things with the handover to universal is that they* (health visiting and other services) *don't fully understand what we have done. I have my own anxieties about what they expect from the girls."*

In Chapter 5 the potential for a positive impact of FNP is covered in detail but it is clear that the observation of these changes which FNs report are helping nurses to stay enthusiastic about the programme and reinforcing their trust in it, enabling the graduation process to proceed smoothly.

4.6 Conclusions

Overall, it appears that delivering this new programme, new at least for England and the NHS, was highly acceptable for the nurses involved and according to their reports it was also acceptable both to young mothers and to their partners. According to FNs, since it was not possible to talk to fathers directly in toddlerhood, they are as involved with the programme as in previous phases and perhaps even more so as they enjoy play and other activities with their toddlers. One feature of toddlerhood that increased its acceptability for FNs and clients alike was the modernisation and Anglicization of the materials. This was part of the more general roll-out of FNP into other areas but the Wave 1 nurses were able to experience clients' reactions to both the original and the new materials, which now included more colourful illustrations, examples that had an English focus rather than American, and which provided links to other materials and activities provided through the NHS.

There were, however, some difficulties with the aspects of the programme materials that dealt with monitoring children's development, which becomes a specific focus in toddlerhood with the emergence of language. The Ages and Stages Questionnaires were generally liked by FNs and clients. These are parent-completed measures and as such can allow parents to say their child can achieve a developmental task whereas it might only just be emerging. The fact that in these pilot sites the questionnaires were completed at 4, 10, 14 and 20 months while the data are recorded by FNs only at 6, 12, 18 and 24 months made it more likely that mothers will say by the data collection time that a particular skill is present (see Chapter 5 for full details of the measure and their outcomes at each time point). Since they were used for the first cohort of clients the procedure has been amended so that they are recorded at the time of administration, which will mean that they are probably more useful. The MacArthur CDI, used at 21 months, is designed as a screening device so that children with likely language delay can be referred for the relevant intervention before graduation. Some FNs, while familiar with the concept of screening, balk at the fact that a screening measure needs to have items that many in a population will not achieve, so that it can discriminate. More in-house training may be required so that the FNs can make the best use of this measure.

The FNs report their satisfaction with delivering the programme more smoothly as they have become used to the format of the facilitators and other programme materials. However in toddlerhood new situations arise that can make it more of a challenge for them to deliver the programme effectively. The most obvious is the toddlers. Thanks to their good work these children are inquisitive and active, which means that the parenting skills of clients are put to the test during visits. Other demands are also place on clients as they progress in ways that

the FNP intended, gaining employment or returning to education. Some clients have also coped well with a second pregnancy or child (see Chapter 5 for details). This all makes for a more complex situation that FNs have negotiated well, but it can add to their stress.

The particular feature of toddlerhood is that the programme will end with graduation, designed to take place when children reach 24 months. From 21 months the visits become less frequent (monthly) and many of the materials focus on endings and moving forwards. From the FN reports (and indeed from the data presented in Chapter 2) it appears that some nurses are reluctant to stop visiting some of their clients. They describe several reasons for this; some were more personal, feeling that the separation from the clients was going to be difficult for both FN and client and some more organisational, having doubts about the effectiveness of the local health visiting support or getting poor support from the local children's centres. The former personal reasons can be addressed both in training of future FNs and in supervision of those who have clients approaching graduation. The latter are more profound in that they are beyond the influence of the FNP teams. It has been well publicised that health visiting is poorly funded in some areas with many staff shortages. However, FNs must hand clients over. They sometimes carry on visiting after failure to make a joint visit with a local health visitor, but this may be an unrealistic expectation in the current economic climate. It would be more effective to ensure that clients are confident and able to seek out whatever health or related services that they or their child needs.

With resources limited commissioners and policy makers are not going to look favourably on a service that purports to extend until children are 24 months but in fact extends further since this will in the long term reduce the number of other clients who can benefit. These Wave 1 FNs were the first to put into practice the complex process of 'ending' and their experiences will be invaluable for nurses preparing for the next wave of programme completers. However, the Wave 1 sites have also been unique in that their endings coincided with recruitment to the RCT, which resulted in some low case-load numbers. Other sites will not face this complication and will have other clients in the wings, which may make the process smoother. The availability of the free nursery place for disadvantaged two year olds will also be of benefit. There may be potential to influence practice in children's centres although again the FNs may be overly hopeful to expect centre staff to make home visits or accompany young mothers to activities. Again, boosting confidence to enable the young mothers to make the transition to groups and other activities in centres may be the best way forward, encouraging them that cliques can be opened up, especially if a critical mass of younger mothers visits the centre regularly.

Chapter 5. Potential for Impacts

5.1 Outcomes reported by practitioners

Subjective evidence from practitioners about their own effectiveness is limited in terms of the evaluation of outcomes of a programme. What is needed is independently collected data from a scientific trial, such as the one of FNP underway. However, it should be noted that the comments made were consistent across all practitioners in the pilot study. Still hardly objective since these are individuals responsible for FNP in their area, but perhaps slightly removed from the practice, were observations made by associated staff, like the project lead who observed the children of clients in a group celebration for those who were 'graduating from the programme' and remarked on how *'wonderful'* the children looked. She described this impression as coming from their physical appearance, their interaction with one another and with their parents, and their vitality.

Some other comments from outsiders were reported by FNs. These tended to be about the general impression created by parents who had been on the programme, and the impression is often unspecific. For example, the following report is from an FN:

> *"We had a celebration party attended by clients and partners and children. A support worker* (in a children's centre where the event took place) *said 'It's fantastic; I have been watching these parents and how happy they are." They were left for three hours and she said, 'In our children's centre it would be bedlam. The parents would be ignoring them and they would be running riot. You have got mums and dads really involved."*

Such comments have limited value in evaluation terms. The fact that direct speech is used adds a further level of doubt about them. Is that really what the support worker said? Has the Family Nurse processed this into something more or less complimentary? But there were several similar anecdotes, and they shared the following ingredients:

- they tended to be made about groups of clients assembled together, suggesting that the individuals share a common quality;
- they describe something unspecific but palpable about the individuals, in the quoted case 'how happy they are' (both children and parents are implied);
- they often compare the FN clients with other groups of children and/or parents.

In this section we look at other observations made about clients and their children who have completed the programme. Although as evaluation data they need to be treated with caution, as mostly made by FNs themselves about their own clients, they described 'outcomes' which are very difficult to capture in quantitative monitoring, and deserve, at least, to be acknowledged.

Parents are 'empowered' and confident

FNP tries to give parents a sense of control over their own lives and emphasises 'self-efficacy' in the learning relationship. For many FNs the importance of self-efficacy was shown by the way relationships within households improved while clients were involved in the programme. Because clients were able to communicate within the household, with partners, or parents, friction was reduced and this improved the relationship with the child, both between mother and child and other family members and the child. This can lead to practical changes:

> *"They deal with arguments better. I have had mums who have reconciled with their extended families. Nutrition has improved. Other family members don't smoke in the house, they go outside."*

The significance of these changes is greater when the type of behaviour is analysed.

> *"Some are really taking control of their lives…Not back in their old behaviours. They really come from engrained cultures and they are really making some changes there."*

The difficulty of this task for a young mother who will often be dependent on the support of the extended family should not be under-estimated. Yet, as another FN in the same area described, clients sometimes compare their own child rearing to that of their relatives, and are proud of themselves.

In a very specific anecdote about the impact of FNP on an extended family an FN told the following story:

> *"We've had some unexpected bonuses, like the maternal grandmother, who is historically known to social care going on a parenting programme which was just a by-product of her seeing her daughter doing all those things."*

The FN was able to talk to this grandmother, who had children between the ages of 3 and 19 years, but knew that she had not taken up the offer of a parenting course when it was made by other practitioners, like a health visitor and school nurse.

> *"The next time I saw her she had signed up for it, and she was pleased as punch about it and showed me the books when she was starting it, she was really excited about it. I'd never thought of the impact on the wider family, it's a shame we don't capture that in some way."*

Nurses noted that conflict in families was reduced by the programme being offered in a household. Some pointed out that the programme was unique in that effect. As a health visitor the following respondent said that people told her about conflict but

> *"You would never have the opportunity to go back with help. We* (FNs) *can help to explain why they get into these situations and to put themselves in the other person's shoes."*

Another FN observed of programme clients:

> *"Their relationships are much more mature than other people of their age."*

This maturity and self-reliance is observed beyond the household as well.

> *"One of the lovely things is seeing how much more articulate they become and more confident they become in staking their corner. All of the girls were virtually mute in their looked-after interviews in the beginning. Now they can actually argue their corner and they know what they want out of life."*

The capacity to stand up for themselves and express their point of view can radically alter the mother's view of her position in the world. As one FN noted it develops into:

> *"An ability to alter their life course based on their own decision-making. Whereas I remember getting the impression that families just think things happen to them. It is just done to them; they don't look at their role in that. I think they certainly do look at the role in it now…rather than sitting in a bus as a passenger in their life, they do get in the driving seat."*

In another area a Family Nurse described her 'graduates' as feeling confident enough to deal with problems without panicking or feeling judged:

> *"More confident about being a mother, not feeling that by being young they are not a good mother; being proud to show off their skills in front of other people."*

This is a reminder that for many young mothers the route to being confident starts at a lower point than for older parents – they feel labelled and despised. An FN described what this meant for another mother, whose confidence allowed her to speak up at the hospital where her child had been admitted suffering with bronchitis.

"All went well, but at one point the doctor said that he was not going to reduce the level of oxygen the baby was having. She said to him 'I know my own baby and I think we should try. I think he is breathing OK – please can you reduce it?' They did reduce it…and the baby was absolutely fine…It takes quite a lot of courage…to talk to a doctor like that."

Allied to the idea of empowerment and self-reliance, confidence is the personal quality that mothers need first. In the established literature of early years services a famous text (Pugh, DeAth and Smith, 1994) links this quality to child development. FNs report observations of this link. And they also point out that confidence in a mother who begins from a serious low point may be something that only a practitioner who has accompanied her on the road can really appreciate.

"Although the changes don't seem huge – from where she has come from…she invited me (for the final celebration) *to go to a beauty spot and we had an ice-cream. I am really proud of her. She couldn't make eye-contact with me for about a year."*

Some of these improvements simply emerge from knowing what to do. Where mothers have spent their own childhoods in care or in dysfunctional situations, their social skills may be too limited to enable them to interact with confidence:

"A lot of the social skills they didn't have at the beginning of the programme – like saying thank you for things or seeing you to the door. At the beginning in particular she would often not be in; over the two years she will now tell me clearly that she can't make the visit."

All FNs have observations of a similar kind, about the lack of knowledge about basic social interaction among some young mothers. FNP not only provides them with information about behaviour, there is a role model in the FN, and someone with whom to practice the new behaviours.

"It's opened their eyes to the way the rest of the world might operate and how they *might operate in the world and out of these little ghettoes that they live in."*

The improvements in confidence are observed in relation to other parents, in group situations. One of the outcomes of confidence is a willingness to engage with other services, and it has already been reported that a proportion of clients do not feel able to use universal facilities like children's centres. When they go, however, some find the experience reinforces their confidence. For example, one FN noted that her clients stood out in Stay and Play – both the children in comparison with other children and the parents for their parenting skills. Clients were also reported as commenting on the parenting skills, and observing what was going wrong between parents and toddlers:

"I went to a group with one of my girls…and this other mum, she couldn't see the signs. My girl said to me, 'She's not recognising'."

Making good life choices

Alongside self-efficacy, FNP emphasises reflection as a technique to develop in parents so that they can make choices about their lives. There is evidence from quantitative data about the numbers of mothers who return to training and education, and some of the anecdotes suggest that some have changed their ambitions and their expectations of education by the time they return to it. Once again, the qualitative data suggests how difficult this can be for mothers who are starting from the position that many of these young women find themselves in:

"One mum has gone into education and she is quite proud of getting into this course through an interview – she is enjoying it. She has had quite a lot of negative things going on around her: it is not just family but high unemployment in the area, so they are almost saying she won't manage to do it. So these girls are desperate to prove them wrong, really. I think they are proud of themselves as parents and proud of what they have attained."

The sense of this achievement is expressed in a message which one client sent to her FN about going to college.

"I had one mum that wrote me a text that said 'Hi, I start college on Wednesday. So excited, can't wait to tell you about it. Thanks for getting me here. I wouldn't be doing this if it wasn't for you helping me. Thanks so much, really feel I can start living again now."

Outcomes for Children

The conventional wisdom in child development is that these kinds of changes in the mother and her attitude to herself will have an affect on the child's progress. FNs take personal satisfaction in the observed progress of children.

"I have been completely amazed at the level at which the children are functioning because having worked as a health visitor previously you get a feel for the groups of parents and how children react. Speech and language has been amazing, the development with the interactions. It just really confirms that this way of working really does work with parents, they really engage with the children and there is a lot more interplay with them and you can see them developing really well."

Another nurse, describing the interactions, said that these had changed.

"Instead of saying 'no' all the time, parents are using other phrases and arguing between parents and children has been reduced."

In a further comment a FN ascribes these changes to an improvement in confidence and also a use of reflective techniques among clients.

"One of the biggest things is …this anticipation awareness…that is a lot to do with going in all the time and getting them to think what they are doing, tell you what the child is doing, and what accidents they might have, and what might happen next…that looking forward business…to me that's one of the biggest outcomes."

The outcomes in children should become measurable and observable when they go to school. Some Family Nurses feel these outcomes are already palpable:

"If I think about children I have known previously, that was a big problem: they were starting nursery and running riot. But these children have been doing a whole range of activities – like holding crayons. And the communication: they are talking and expressing themselves from an earlier age. It would be lovely to get feedback, in a few years, about how they are getting on at school."

Although that feedback from the RCT of FNP will be the proper basis for judgement of FNP outcomes, FNs themselves are confident that it will materialise!

Changes in Home Life

All FNs note that mothers have made progress in less conspicuous but significant ways: Organisation of the home is often cited, and making the home safe for the child, Mothers have learned to manage money and budgeting is mentioned as a sign of change here.

"Budgeting we do go through and once they are sorting that out, the nutrition definitely improves."

Eating habits, reductions in smoking, rules about smoking in the house (often by partners and parents), and household routines are all ways that FNs feel the programme has affected families. One of the biggest changes has been a reduction in the time the television is on in households. FNs say that it is often difficult for clients to change the 'TV always on' habit, but they do.

> *"I have noticed from the first visits there is less TV now. I tell them the children don't need to watch it. There is a decline in the amount of TV on…And also the types of programmes on…Some families in the past had the telly on from first thing in the morning all day until bed-time."*

Some mothers are learning to cook. Although skills like these are not directly taught by the programme, FNs still hear about progress:

> *"One of my girls, the Housing Support Worker is helping her with her cooking – if somebody else wants to do it, it's great - ...she told me yesterday she wants to make a vegetable stir-fry next week, she made a quiche last week."*

FNs rating of outcomes achieved in toddlerhood

At their initial training in Durham all FNs and Supervisors were asked to rate a series of outcomes and the expectation they had of the effect the programme might have on each of these. This was repeated at the end of the programme delivery in pregnancy and then when they were interviewed after having taken some clients through the whole programme. The results of these ratings of their potential to influence these outcomes are given in Table 5.1. They represent in toddlerhood a perception that could be more modest that the heady days of their first training, or one that is vastly improved having seen what their clients have achieved.

Table 5.1 Family Nurses' estimation of the potential impact of FNP on outcomes at three time points (1 = no impact; 10 = large impact)

Outcome	Mean initial training	Mean end pregnancy	Mean end toddlerhood
Maternal Health, pregnancy	7.3	7.9	7.7
Prenatal infant development	7.1	7.7	8.3
Breastfeeding	7.7	6.7	7.4
Mother's cigarette smoking	6.4	6.5	5.4
Infant and child development	8.1	7.7	7.7
Injuries to the child	7.4	7.3	7.8
Spacing, subsequent pregnancies	6.9	7.0	6.5
Self-sufficiency of mother	7.3	6.8	7.1
Maternal employment	6.0	5.7	7.1
Readiness for school/nursery	7.3	6.6	8.1

This shows that at the Toddlerhood stage they were more likely to expect that FNP would have an impact on prenatal infant development, readiness for school and maternal employment than when they first started. Expectations regarding breastfeeding, child injuries, and self-sufficiency were relatively unchanged while they were less likely to expect to have an impact on maternal smoking. However for all the outcomes listed apart from maternal smoking and subsequent pregnancies their expectations of the potential for FNP to improve outcomes were high, above 7 out of 10.

5.2 Outcomes from routine data collection

One of the strengths of the FNP is that nurses collect a range of information about the clients and their children in a standardised manner as they progress through the programme. However, since the clients are a specific group, both young and first-time mothers, there is in general no easy way to say whether any of the behaviours recorded, such as for instance the use of birth control, represent any particular progress that can be linked with receiving the programme. The FNP randomised trial is underway and that will be able to compare FNP clients with a group that have the same characteristics. Until that time the implementation evaluation can provide descriptive information about this one cohort of young mothers.

Birth control
At six months after their first child's birth only a small percentage of clients (7%) were not using birth control while the majority either reported using birth control (84%) or not needing it since at the time they were abstinent (see Table 5.2 and Appendix B for details by site). The proportion not using birth control was slightly greater at each time point so that by 24 months 17% were not using birth control. The proportion reporting that they were not engaging in sexual activity remained stable while the proportion using birth control had dropped to 75%. Note that in all tables the number of clients who were still active in FNP is greater than those with data. Thus it is not possible to know whether forms were not completed because the FN did not make a visit at the relevant time, or alternatively that they knew the client was not using birth control (possibly if she was pregnant) so did not ask the question.

Table 5.2 Reported use of birth control at each time point (percentages in brackets)

Time point	N	Yes N (%)	No N (%)	No sex N (%)	No data
6 months	820	689 (84)	75 (9)	56 (7)	164
12 months	688	539 (78)	90 (13)	59 (9)	179
18 months	544	403 (74)	97 (18)	44 (8)	268
24 months	513	383 (75)	85 (17)	41 (8)	268

Table 5.3 Frequency of use of contraception by time point (percentages are of those who reported using contraception and who gave frequency)

Time point	N	Every time N (%)	Most of time N (%)	Half the time N (%)	Some of the time N (%)
6 months	671	490 (73)	113 (17)	13 (2)	55 (8)
12 months	528	376 (71)	93 (18)	4 (1)	55 (10)
18 months	399	294 (74)	54 (14)	5 (1)	46 (12)
24 months	375	284 (76)	36 (10)	13 (3)	42 (11)

Table 5.4 Methods of contraception used over time (percentages in brackets)[8]

Type	Birth to 6 months	6-12 months	12-18 months	18-24 months
Total with data	834	689	548	517
Male condom	314 (38)	204 (30)	145 (27)	129 (25)
Birth control pill	288 (35)	228 (33)	153 (28)	133 (26)
Hormonal implant	116 (14)	115 (17)	108 (20)	100 (19)
Quarterly injection	103 (12)	74 (11)	47 (9)	44 (9)
IUD	21 (3)	23 (3)	28 (5)	27 (5)
Emergency pill	22 (3)	8 (1)	5 (1)	3 (1)
Withdrawal	14 (2)	14 (2)	11 (2)	5 (1)

The most popular form of contraception at 6 months was the male condom (see Table 5.4) but its popularity reduced slightly over the time periods from 38% at 6 months to 25% at 24 months. The use of the birth control pill in contrast was the second most popular type of contraception at 6 months (used by one third of those with data) and the most popular subsequently. The use of hormonal implants appears to increase over time from 14% to 19%. The proportion of clients using quarterly injections reduced slightly over time from 12% to 9% whereas the IUD gains marginally in popularity, though not a common choice. A number of the types of contraception covered in the questionnaire are rarely (less than 1%) or never used at all at any time point, namely: cervical ring, cervical cap, diaphragm, female condom, patch, the rhythm method, spermicide or foam and the sponge.

Subsequent pregnancies and births

There have been subsequent pregnancies and live births. Data were available on pregnancies or births for 850 of the first cohort of clients and 293 (34%) had become pregnant, mainly just once (250, 29%) or twice (33, 4%). This is comparable to the rates in US trials of 36% in Memphis (compared to 47% for those without the programme; Kitzman et al., 1977) and 29% in Denver, compared to 41% in the control group (Olds et al., 2002). Four clients became pregnant 3 times (0.5%) and six became pregnant 4 times (0.7%). The mean time between the birth of the first child and the next pregnancy was 10 months (range 1 to 22) and just under one third (77/261[9], 30%) were within the first six months after the birth of their first child, representing a rate of 9% The mean time to the second pregnancy was 13 months (range 3 to 24) with seven of those second pregnancies (16%, 0.5% of clients) also within six months following the birth of the first child. By definition these clients are also represented in the larger group whose first pregnancy was within six months of their first baby's birth.

One hundred and five of the 850 clients with data had given birth to a second child (12%), the same as the rate found in the Denver trial (Olds et al., 2002) and lower than that found in the Memphis trial (22%, Kitzman et al., 1997). The mean time between first and second births (N=97) was 17 months (range 10-25). No client was recorded as having given birth to two children during the time that they were receiving FNP.

Looking only at the slightly smaller group of clients who should definitely have completed FNP, with a child that was or would be at least 24 months old there was information about pregnancies and births for 774 and 269 had become pregnant at least once(35%) (see

[8] Clients could report more than one type of contraception used over the preceding 6 months
[9] The date of subsequent pregnancies was not available for all clients

Table 5.5 for rates by site). The majority (229, 30%) had become pregnancy only once, 30 twice (4%) four clients three times (0.5%) and six clients four times (0.8%).

The mean time between the birth of the first child and the next pregnancy was 10 months (range 1 to 22) with variability between sites but no significant difference between the means (see Table 5.5). Just under one third of the first pregnancies (67/241, 28%) were within the first six months after the birth of their first child, representing 6% of the 1177 clients, 9% of the 774 with data. There were 41 second pregnancies and the mean time to the second pregnancy was 14 months (range 3-24) with six within 6 months of the birth of their first child.

One hundred and three of the 774 had given birth to a second child (13%). The majority of births (94) were from a first pregnancy, with six from a second pregnancy, one from a third and two from a fourth. The mean time between first and second births (N=95) was 17 months (range 10-25). While there was variability between sites, there was no significant difference between their mean values (see Table 5.6).

Table 5.5 Numbers of pregnancies and births by site for clients whose first child was/would have been at least 24 months old

Site	N	No pregnancy recorded	At least one Pregnancy (%)	Pregnancy and a birth (%)
1	65	41	24 (37)	6 (9)
2	82	54	28 (34)	13 (16)
3	115	73	42 (42)	20 (17)
4	92	59	33 (36)	13 (14)
5	71	47	24 (34)	10 (14)
6	60	41	19 (32)	5 (8)
7	71	48	23 (32)	2 (3)
8	70	52	18 (26)	8 (11)
9	77	51	26 (34)	12 (17)
10	71	39	32 (45)	14 (20)
Total	774	505	269 (35)	103 (13)

Table 5.6 Mean time between first child's birth, subsequent pregnancy and birth of a second child by site; clients with first child at least 24 months old

Site	N	Months to first new pregnancy	N	Months to second birth
1	21	10.9	5	17.2
2	27	10.0	10	16.0
3	38	9.3	19	16.6
4	29	11.1	13	19.0
5	21	9.2	9	15.3
6	19	10.7	5	16.0
7	17	10.8	2	18.5
8	16	8.7	5	16.2
9	24	10.7	12	20.2
10	29	10.3	15	18.1
Total	241	10.2	95	17.4

Education
Enrolment in any kind of educational or vocational programme was asked five times during involvement in FNP starting at intake and then at 6, 12, 18 and 24 months after the infant's birth. Forms were not submitted for all clients even at intake so frequencies may be subject to error.

Table 5.7 Enrolment in education or vocational training for those clients with data at each data collection time point

	With data N	Enrolled	Not enrolled	Active, no data
Intake	1173	332 (26)	841 (64)	130
Active 6 months	816	171 (21)	645 (79)	168
Active 12 months	679	166 (24)	513 (76)	188
Active 18 months	537	121 (23))	416 (77)	275
Active 24 months	511	138 (27)	373 (73)	258

Overall at any time point it appears that around one quarter of FNP clients were enrolled in education, with a slight drop at 6 months after their baby's birth. However these percentages represent only those for whom an update data form was completed at each time point.

Educational status at intake would be strongly influenced by their age at intake, with possibly the most concern for those who were not yet of school leaving age or were in their final year of school (aged 13 to 16). Thus change in education/training status is presented by age group in Table 5.8

Table 5.8 Enrolment in education or vocational training at any time point by age group at intake

Age group	N	Never enrolled	Intake only	After birth, not intake	After birth and intake
13-16	212	64 (30)	59 (28)	30 (14)	59 (28)
17-19	754	441 (59)	107 (14)	125 (17)	81 (11)
20-24	218	169 (78)	15 (7)	23 (11)	11 (5)
Total	1184	674 (57)	181 (15)	178 (15)	151 (13)

There was a significant difference between the age groups in the extent of involvement in education (Chi Square 130.23, 6 df, $p<0.001$). As would be expected the age group most likely to be in education at intake was the 13-16 year olds (56%) and half of those were also enrolled in education after their baby was born. It is also encouraging given the rather large percentage not involved in education despite their young age that 30 young clients who had not been in education at intake were subsequently enrolled. Similarly 17% of the 17 to 19 year olds not enrolled in education at intake did so subsequently, and 11% of the older clients aged 20 to 24. One quarter of the 17 to 19 years olds were in education at intake and some of those (11%) also continued or resumed education that had been in progress

when they were enrolled in FNP after their child's birth, which would be after the school leaving age indicating that they were working to extend the qualifications gained during their school years.

It was possible to look at change in the number of GCSE qualifications held at each time point to look at the extent to which there was any increase, though again the data were not always collected for everyone at each time point suggesting that some FNs did not complete the questions in the update form unless they knew that there had been some change. Data at each of the time points is variable and represents many fewer than the number of active clients at that point. Thus a new indicator was created with the highest number of GCSEs recorded at any time point after intake, with a second indicator of the number of 'good' GCSEs at A* to C grade, so that information could be identified for the largest number of clients.

The mean number of GCSE qualifications (any grade) at intake was 4.2 and the mean highest number recorded after intake was 4.7, a significant increase ($t = 10.33$, $p<0.001$) with a significant increase in the number for all age groups, the biggest change being unsurprisingly for the 13 to 16 year olds (see Table 5.9). The change was also evident in each site (See Appendix C). The proportion of clients with any GCSEs rose from 64% to 70%. The mean number of GCSE qualifications at A* to C was 2.1 at intake with 2.5 the highest number recorded at any point after that ($N=1117$, $t=7.31$, $p<0.001$). The change was also significant for each age group (see Table 5.10) with the greatest gain by the 20 to 24 year olds. Details of change in the mean number of 'good' GCSEs by site are in Appendix C. The change was significant in each site. The proportion of clients with any A* to C GCSEs rose from 47% to 53%.

Table 5.9 Change in the mean number of GCSE qualifications at any grade by age group

Age group	N	Intake, mean number	With any N (%)	N	After intake mean highest number	With any N (%)
13-16	187	2.1	65 (35)	213	3.4*	117 (55)
17-19	722	4.6	511 (71)	755	5.0*	561 (74)
20-24	215	4.5	140 (65)	218	5.1*	152 (70)
Total	1124	4.2	716 (64)	1186	4.7*	830 (70)

Table 5.10 Change in the mean number of GCSE qualifications at A* to C by age group

Age group	N	Intake, mean number	With any N (%)	N	After intake mean highest number	With any N (%)
13-16	191	1.1	48 (25)	213	1.8*	89 (42)
17-19	715	2.4	365 (51)	738	2.6*	412 (56)
20-24	211	2.3	109 (52)	213	2.7*	121 (57)
Total	1117	2.1	522 (47)	1164	2.5*	622 (53)

Employment
At intake just over half the clients reported some history of employment but only a small percentage were working at that point in time (11%, see Table 5.11). By the end of toddlerhood that proportion has increased in each phase to reach 30% who had been employed since their child's birth, with the average length of time working nearly 9 months, though some reported working for the whole two years (see Table 5.12).

Table 5.11 Employment since the birth of their baby for those clients active with FNP at each data collection time point (percentages in brackets)

	With data N	Employed	Not employed	Active, No data
		At intake	At intake	
Lifetime, ever	1175	653 (55)	525 (45)	128
Currently	1175	249 (11)	926 (79)	128
		Since birth	Since birth	
Active 6 months	822	94 (11)	728 (89)	162
Active 12 months	679	143 (21)	536 (79)	188
Active 18 months	536	126 (24)	410 (76)	276
Active 24 months	509	153 (30)	356 (70)	260

Table 5.12 Mean number of months worked since birth of infant at each data collection time point

Employed	With data N	Mean months	Range	Months of continuous employment N (%)	Employed, no data
By 6 months	59	2.3	1-6	≥3 18 (31)	35
By 12 months	65	5.1	1-12	≥6 30 (46)	78
By 18 months	122	7.2	1-18	≥12 24 (20)	4
By 24 months	150	8.9	1-24	≥18 24 (15)	3

The question concerning whether clients had ever worked since their baby's birth was not always consistently answered over time. For example the data may show that they replied 'yes' at 6 months and 12 months but 'no' at 18 months, whereas the question asked at each time point is the same "Have you worked at all at a paid job since the birth of your infant?" Presumably some thought that they should only say yes if they had worked since they were last asked. Thus the data from Table 5.11 were combined across all time points to show the maximum number who had ever worked since their baby's birth. In total there was information about employment at some point after birth for 870 of the clients.

Of the 870 with some information about employment 254 (29%) had worked since their infant's birth. Specifically, 117 (13%) had been working at intake and had also worked since their child's birth, 83 (10%) had ever worked though not at intake but had subsequently been employed after their baby was born and a small number (54, 6%) were new to the world of employment since their baby's birth. A larger number (616, 71%) had not been employed since their child's birth, 67 (8%) had been working at intake but not since their baby was born, 206 (24%) had worked at some point in their life though not at intake and not since the birth and 343 (39%) had never been employed either before or after the birth. These patterns of employment are summarised by age group in Table 5.13.

Table 5.13 Change in work status (ever employed) since the infant's birth by age group (percentages in brackets)

Age group	N	Never employed	Before, but not since birth	Not before, but since birth	Before birth and since
13-16	160	115 (72)	21 (13)	12 (8)	12 (8)
17-19	540	182 (34)	193 (36)	39 (7)	126 (23)
20-24	170	46 (27)	59 (35)	3 (2)	62 (36)
Total	870	343 (39)	273 (31)	54 (6)	200 (23)

There was a significant difference between the age groups in the extent to which they had been employed both before and after their infant's birth (Chi Square 111.57, 6 df, $p<0.001$). Not surprisingly the main age group difference was that almost three quarters of the 13 to 16 year olds had never been employed. Perhaps more surprising is that so many of them had already been employed and 16% were employed after their infant's birth. Larger proportions of the older clients and particularly the 20 to 24 year olds were employed both before and after their infant's birth. Only a small proportion overall (6%) represented clients new to employment since their baby was born and these were least likely to be the older clients.

The percentage of clients who were reported as employed at the specific time point rather than since their infant's birth was low at 6 months (7%, see Table 5.14) and remained relatively stable for the next year, rising to 18% by the time of graduation.

Table 5.14 Current employment at each stage of data collection (percentages in brackets)

	With data N	Currently employed	Not employed	Active no data
Intake	1175	249 (11)	926 (79)	128
Active 6 months	826	58 (7)	768 (93)	158
Active 12 months	677	96 (14)	581 (86)	190
Active 18 months	534	74 (14)	460 (86)	278
Active 24 months	506	89 (18)	417 (82)	263

Not in employment, education or training (NEET)

Being neither in education, employment or a vocational training programme, known as NEET, is perceived to be undesirable for young people, although obviously situations such as being pregnant or giving birth will have an impact on this. At intake to the programme, slightly more that half the clients (57%) were in this situation (see Table 5.15 and Appendix C, Table C3 for details by site). It was most likely that clients would be NEET at 6 months after their child's birth. It should be noted that it is not known whether any mother was on maternity leave at 6 months, the question asked is whether she is working in a paid job. The proportion of young women considered NEET became gradually lower until at 24 months, when it was approximately the same as it had been at intake (61%).

Table 5.15 Not in employment, education or training (NEET) status for clients active at each stage of data collection (percentages in brackets)

Time point	With Data N	NEET N	Employed and/or in education	Active No data
Intake	1163	659 (57)	504 (43)	140
6 months	808	588 (73)	220 (27)	176
12 months	669	432 (65)	237 (35)	198
18 months	525	348 (66)	177 (34)	287
24 months	501	305 (61)	196 (39)	268

While the youngest age group (13 to 16) should have been in education at intake only 60% were (see Table 5.16), with NEET rates higher for the older clients. This pattern continued until children were 24 months when all three age groups had similar proportions of NEET clients.

Table 5.16 NEET status at each stage of data collection by age group (percentages in brackets)

	NEET Intake	NEET 6 months	NEET 12 months	NEET 18 months	NEET 24 months
13-16	82 (40)	87 (59)	69 (53)	57 (59)	57 (62)
17-18	442 (60)	376 (75)	278 (67)	225 (68)	193 (61)
20-24	135 (63)	125 (81)	85 (70)	66 (68)	55 (61)
Total	659 (57)	588 (73)	432 (65)	348 (66)	305 (61)

Child development

At four points during the programme the Ages and Stages Questionnaires (Squires, Potter & Bricker, 1999) are completed. They are designed as a parent completed measures with items for children of different ages at intervals from 4 to 60 months, used in FNP at 4, 10, 14 and 20 months. All time points in both infancy and toddlerhood are reported here because some additional data have been made available since the infancy data collection time points were summarised in a previous report. The Wave 1 FNs initially recorded the data two or more months after it was collected, at 6, 12, 18 and 24 months. This has since been changed so that FNs now record the information when it is collected.

Each questionnaire has 30 items written in simple language, covering five aspects of development: communication, gross motor skills fine motor skills, problem solving and personal-social behaviour. For each item the parent decides between ‘yes’ their child does perform the behaviour, ‘sometimes’ to identify emerging skills or ‘not yet’. Their responses can then be scored with 10 points for yes, 5 for sometimes and 0 for not yet to give a possible range of scores for each of the five subscales from 0 to 60. Cut-off points are available for each subscale, based on two standard deviations from the mean in the standardisation sample and they vary for each scale and at each age (see Appendix D for details of cut-off points for each scale at each time point).

A companion measure, the Ages and Stages Questionnaires: Social-Emotional (ASQ-SE; Squires, Bricker & Twombly, 2003) documents difficulties in self-regulation and emotional behaviour, designed to be used at six-monthly intervals from 6 months up to 60 months and used in FNP at 6, 12, 18 and 24 months. Different versions contain between 19 and 33

questions to which the parent responds 'most of the time' (10), 'sometimes' (5) or 'rarely or never' (0) and for this measure a low score is preferable. The total item score is summed and used with the average item score and the number of items completed to arrive at a total score than can range from 0 up to 300. Again there is a different cut-off score for each age band indicating a child who is at risk and needs follow-up, this time based on ROC curves since the distribution is skewed towards most children gaining a low score (see Appendix D for details of all cut-off points).

At most time points and for most scales few children are identified as 'at risk' for developmental problems in that their scores are below the cut-off point (see Table 5.17). The only exceptions are gross motor development at 4 months when 10% were identified and communication at 20 months, when 14% were identified. The proportion of children identified as above the cut-off point for socio-emotional problems is also is low at all time points (2% or 3%, see Table 5.17). The mean scores and rates by site (Appendix D) but should be treated with caution as the numbers 'at risk' per site are small.

Table 5.17 Mean scores over time for the Ages and Stages Questionnaires and the percentage at risk for developmental concerns

	Active N	N	Mean score	Range	Below cut-off N (%)
	ASQ Communication				
4 months	984	759	53.4	10 - 60	15 (2)
10 months	867	622	51.9	0 - 60	9 (1)
14 months	812	489	51.8	0 - 60	27 (6)
20 months	769	469	50.8	0 - 60	64 (14)
	ASQ Problem solving				
4 months	984	759	55.0	20 - 60	16 (2)
10 months	867	621	53.1	10 - 60	18 (3)
14 months	812	488	50.4	10 - 60	10 (2)
20 months	769	468	50.3	0 - 60	4 (1)
	ASQ Gross motor development				
4 months	984	759	53.9	5 - 60	75 (10)
10 months	867	621	49.0	0 - 60	14 (2)
14 months	812	489	54.0	0 - 60	18 (4)
20 months	769	468	55.6	0 - 60	17 (4)
	ASQ Fine motor development				
4 months	984	759	52.6	5 - 60	14 (2)
10 months	867	621	54.8	10 - 60	18 (3)
14 months	812	489	52.0	15 - 60	4 (1)
20 months	769	468	54.1	0 - 60	10 (2)
	ASQ Personal-social skills				
4 months	984	759	53.5	5 - 60	14 (2)
10 months	867	621	50.6	5 - 60	7 (1)
14 months	812	487	54.8	0 - 60	2 (0.4)
20 months	769	468	55.1	5 - 60	13 (3)
ASQ-SE emotional and behavioural problems					Above cut-off N (%)
6months	984	690	14.0	0 - 90	12 (2)
12 months	867	616	16.6	0 - 75	18 (3)
18 months	812	518	17.1	0 - 85	14 (3)
24 months	769	499	15.6	0 - 95	9 (2)

The 50 item Sure Start version of the MacArthur Communicative Developmental Inventory (CDI, Harris et al., 2005) was completed at 21 months. It has two levels to indicate that language development may be delayed. Children with scores at or below the 25th percentile are identified as having language that is of concern and those at or below the 10th percentile are thought to be at risk of language delay with different cut-off points for girls and boys.

Compared to the ASQ communication completed at 20 months, a greater proportion of children were identified having language development that is of concern by the CDI but the proportion thought to be at risk of delay is similar for girls (14%) and slightly less for boys (9%; see Tables 5.18 and 5.19). The ASQ does not have different cut-offs for girls and boys and the more fine-grained scoring of the CDI is likely to be more accurate, though as reported in Chapter 4 (section 4.2) the FNs did not like completing the measure, which may explain why so many are missing in some sites.

Table 5.18 Mean scores of the 50 word Communicative Developmental Inventory at 21 months and the percentage below the cut-off for girls by site

Site	Active 21 months N	With data N	Mean	Range	25th percentile or lower ≥15	10th percentile or lower ≥10
1	30	14	24.1	12-43	3 (21)	0
2	37	26	20.5	9-40	7 (27)	4 (15)
3	40	38	22.4	4-39	11 (29)	7 (18)
4	48	43	24.3	2-48	11 (26)	6 (14)
5	34	23	26.4	3-50	5 (22)	2 (9)
6	18	18	20.9	1-40	6 (33)	3 (17)
7	26	15	19.9	5-43	3 (20)	2 (13)
8	30	26	27.8	3-50	4 (15)	2 (8)
9	33	28	24.0	3-50	9 (32)	5 (18)
10	34	23	24.8	2-50	7 (30)	5 (22)
Total	330	254	23.7	1-50	66 (26)	36 (14)

Table 5.19 Mean scores of the 50 word Communicative Developmental Inventory at 21 months and the percentage below the cut-off for boys by site

Site	Active 21 months N	With data N	Mean	Range	25th percentile or lower ≥12	10th percentile or lower ≥5
1	30	14	19.9	3-50	6 (43)	3 (21)
2	49	34	22.1	1-50	8 (24)	1 (3)
3	62	59	17.2	3-49	23 (39)	7 (12)
4	33	27	25.4	1-42	2 (7)	1 (4)
5	34	21	19.2	4-49	6 (29)	1 (5)
6	21	20	16.8	5-43	9 (45)	1 (5)
7	36	27	11.9	1-28	16 (59)	6 (22)
8	44	38	15.9	2-32	13 (34)	4 (11)
9	27	24	14.3	3-33	10 (42)	2 (8)
10	35	24	27.0	7-50	5 (21)	0
Total	371	288	18.7	1-50	98 (34)	26 (9)

Accident and Emergency and Hospital visits for injuries and ingestions
Data were available at 12 months, at the end of infancy, for 713 of the 867 who were active at that point. They had been asked at 6 months and then again at 12 months about any instance during the child's first year of being taken to a hospital A & E department either because of an injury or because they were concerned that their child had swallowed something harmful. There were in total 132 A& E visits for 107 children representing 15% of those with data and 12% of those active at 12 months. The majority of those children attended A& E once (90) or twice (12). Four children had made three visits to A&E and one child had been six times. Of the 132 visits, the majority (94) were for an injury, 16 were for ingestion with no details for the remaining 22 visits. The majority of the children attending more than once did so for injuries.

The same questions were posed at 24 months to determine attendance at A&E in the second year. Data were available for 513 of the 769 active at 24 months. There were in total 123 visits for 104 children in their second year, representing 20% of those with data and 14% of the total number active. The majority of children (88) had attended only once, 13 twice and three children three times. Most visits were again for an injury (105) with 15 for ingestion and no information for the remaining three.

There was information about both years for 478 children and of those 336 (70%) had no A&E attendance for accident or injury in either year, 47 (10%) in the first year only, 68 (14%) in the second year only, and 27 (6%) in both years with 16 of the 27 making only one visit in each year and 11 making more than one visit in infancy and toddlerhood.

Clients were also asked if their child had been admitted to hospital for an accident or injury and of 683 with information for the first year 16 (2%) had been admitted to hospital, mainly once (13), one child twice and two three times. Information was lacking for several of the hospitalisations but 6 were for injury, 1 for ingestion with no information for the remaining 14. Information about A&E and hospitalisation was available for 677 and of those 7(1%) had both been to A& E and admitted to hospital.

In the second year a similar number of children were admitted to hospital for injury or ingestion (15/492, 3%), most once (13) and two twice. Of the 17 admissions 7 were for injury, none were said to be for ingestion but there was no information for 10. Of 462 children with data at both time points, 442 96% (442) had not been admitted to hospital for accident or injury in either year, 13 in infancy only, 6 in toddlerhood only and one child in both years. The majority of the children who were admitted to hospital had also visited A&E (14/17, 3% of the total).

Referral to other agencies
FNs have throughout the programme referred clients for a wide range of additional services. Table 5.20 gives details of referrals made at any point in the programme in order of frequency and also those specifically made during toddlerhood, for all clients who had completed toddlerhood. Throughout the programme the most frequent referrals have been for financial assistance (for 42% of clients) but these are not so common in infancy (7%) and referrals for the client's health were also fewer in toddlerhood that they had been in the other phases. The focus appears to have moved from the mother's health (41% of referrals overall, 19% in toddlerhood) to the child with the most frequent type of referral in toddlerhood (for 21%) for health care services for the child. Housing continues to be a focus

of referrals. Safeguarding referrals have remained relatively rare throughout (6% overall, 4% in toddlerhood).

Table 5.20 Main types of referral made by FNs to other agencies overall and in toddlerhood, in order of frequency throughout the whole programme

	In toddlerhood		**At any stage**	
Type of Referral [10]	**active during toddler-hood N=779**	**%**	**Child was/would be 24+ months N=1177**	**%**
Any Financial Assistance	54	7	493	42
- Healthy Start/food scheme	*20*	*3*	*339*	*29*
- Maternity Pay or Grant	*2*	*0*	*187*	*16*
- Income Support	*5*	*1*	*115*	*10*
- Housing Benefit	*17*	*2*	*92*	*8*
*- Social Fund**	*17*	*2*	*25*	*2*
*- Disability Benefit**	*3*	*0*	*5*	*0*
*- Care to learn**	*2*	*0*	*3*	*0*
*- Education Maintenance Allowance**	*2*	*0*	*3*	*0*
- Unemployment Benefits	*5*	*1*	*82*	*7*
Health Care Services - Client	146	19	478	41
Health Care Services - Child	167	21	390	33
Housing	76	10	359	31
Any Social Care	59	8	128	11
- Safeguarding	*28*	*4*	*67*	*6*
*- Child in Need**	*20*	*3*	*26*	*2*
- Intimate Partner/Domestic violence	*15*	*2*	*69*	*6*
*- Disability services – adult**	*3*	*0*	*3*	*0*
*- Disability services – child**	*3*	*0*	*4*	*0*
Childbirth Education Classes	1	0	133	11
Community Support	49	6	135	11
Mental Health	36	5	112	10
Any Substance Abuse	16	2	114	10
- Smoking Cessation	*8*	*1*	*100*	*8*
- Alcohol	*6*	*1*	*9*	*1*
- Substance Abuse	*4*	*1*	*14*	*1*
Citizen's Advice Bureau	26	3	123	10
Child Care	62	8	98	8
Injury Prevention	29	4	95	8
Any Educational Programmes	34	4	91	8
- GNVQ	*27*	*3*	*66*	*6*
- Alternative High School	*8*	*1*	*29*	*2*
- Home tuition	-	-	*12*	*1*

[10] Referral types marked * were added to the relevant form part-way through programme delivery, for most clients at some point during infancy, so their likelihood is reduced.

Developmental – Child	57	7	88	7
Job Training	24	3	75	6
Breastfeeding Support	4	1	68	6
Connexions*	49	6	64	5
Sexual Health Services*	31	4	51	4
Legal Services	10	1	40	3
Developmental – Client	6	1	15	1
Transportation	-	-	7	1
Refugee/Asylum Seeker advice	-	-	6	1

5.3 Detailed study of graduates

Over a six month period 155 FNP graduates (22% of those completing FNP) were interviewed at least one month after their child reached 24 months. The mean age of their infants was 25.6 months (standard deviation 1.4; range 24 to 31), 70 girls and 86 boys (1 set of twins). All had been active clients throughout the programme; 134 reported that they had taken part in a specially arranged final visit with their FN designed to give closure and time for reflection about what they had accomplished, 3 final visits were pending at the time of the interview and 18 had not had a specific final visit. Just under a quarter (38, 24%) had a second child, a further 12 (8%) were pregnant and just over two thirds (105) did not have a second child at the time of the interviews.

Parenting

When asked to indicated on a 10 point scale from 1 – very unsure about my parenting role and how to progress with life to 10 – feel confident, enjoy being a parent and have many plans for my future, two thirds (102, 66%) rated themselves as 10, with a further 38 (24%) selecting ratings of 8 or 9 and 12 (8%) rating themselves as 5, 6 or 7. Only three respondents rated themselves below the mid-point of the scale, 1 at 3 and two at 4.

They were asked 12 modified questions from the Warmth and Strictness scales of the Parental Attitudes to Childrearing Questionnaire (Easterbrooks & Goldberg, 1984). In the original questionnaire the Warmth scale has 10 items and Strictness has 13, each with a 6 point response scale (strongly agree to strongly disagree). In this telephone interview 6 items were selected from each scale, including those most relevant to caring for an infant or toddler, and to simplify the administration the response scale was reduced to 4 points (not using the moderately or slightly agree/disagree options and instead using simple agree and disagree). The psychometric properties of the reduced scales were similar to those for the original measure, with Cronbach alphas indicating internal consistencies of responses of .81 for Warmth (original scale .58) and .56 for Strictness (original scale .67). While scores on these scales cannot be compared with any previous measure or even with those of scores from other studies, they can usefully be compared with each other and related to other constructs such as mastery and parental distress.

Each of the parenting scales has a possible range of scores from 6 to 24. Scale scores could not be calculated for all respondents since some gave no response to several of the questions. The warmth questions appeared more straightforward and for 148 the mean score was 20.7, with no score lower than 17 and 17(12%) of the mothers gaining a maximum score of 24. Strictness could be computed for 124, with a mean of 12.4, no score higher than 17 and the majority (108, 87%) having scores below the mid-point of the range

of possible scores (14 or lower). The two scales were negatively correlated with each other (-.30, p=.001) and the warmth scores were significantly higher than strictness scores (t = 26.16, df 120, p<.000). Neither of the parenting scales was associated with the respondents' ratings on a 10-point scale of how confident they felt about parenting and their future plans.

The mothers were also given the 12 item Parental Distress subscale of the short-form of the Parenting Stress Index (PSI/SF; Abidin, 1995). They were read statements and asked to respond using a 5 point scale from strongly agree to strongly disagree, with a mid-point of not sure. The total scale score can range from 12 to 60, with a score of 33 or higher representing the 85th percentile or higher in the standardisation sample, indicating a high level of stress. The mean score was 26.0 (range 12 to 58) with 14% at or above a score of 33, thus reflecting the standardisation sample closely; in other words the proportion experiencing distress is similar to the normal population. If respondents had given a lower rating on the 10-point scale assessing their parenting capacity they were likely to have a higher parental distress scale score (r = -.37, p<.000).

Sense of mastery
Developing a sense of efficacy is central to many of the FNP materials. Mothers were asked seven standardised questions to investigate their sense of mastery, a form of perceived personal control over the events in one's life (Pearlin-Schooler Mastery Scale; Pearlin & Schooler, 1978). A low level of sense of mastery has been linked to mental health problems and general ill health. Each item is ranked on a four-point scale ranging from "strongly agree" to "strongly disagree" (reversing the coding on the last two items). Responses are summed (range 7 to 28) with a score of less than 20 categorized as low mastery (Pearlin et al., 1981). The original scale was developed using factor analysis and had substantial stability over time (correlation over 4 years 0.44; Pearlin et al., 1981).

It was possible to compare their responses at graduation with responses to the same questions asked early in pregnancy when the questions were posed by FNs at intake to the programme. Internal consistency of the scale was good at both times (Cronbach Alpha: intake .71, graduation .83) and the association between the two time points was significant (r = 0.35) though slightly lower than the stability over time identified by the measure's developers (Pearlin et al., 1981) indicating that some changes to mastery may have taken place over the time of the intervention. Changes were in fact identified in this group. The mean total score at intake was 20.9 while at graduation the mean score was significantly higher at 22.4 (see Table 5.21). There was a significant increase in mastery for each of items 1 to 5 but no difference to the final two questions (see Table 5.21). The proportion categorized as low in mastery (below 20) at intake was 32% (47/145) with only 15% (22/150) in that category at graduation.

Comparing those with information at both time points there was a significant reduction in the proportion of respondents categorized as low in mastery (Chi Square 14.76, df 1, p<.000; see Table 5.22). Of those with low mastery at intake two thirds did not have a low level at the end of FNP while only 7% of those who had not had a low level at intake subsequently reported a low level at the end of FNP (see Table 5.22).

Table 5.21 Mean scores and difference between intake and graduation for total mastery and for items, scored from 1 (strongly agree) to 4 (strongly disagree)

	Item	Intake	Graduation	T, significance
1	I have little control over things that happen to me	2.9	3.2	3.54, p<.000
2	There is really no way that I can solve some of the problems I have	2.9	3.2	3.95, p<.000
3	There is little I can do to change many important things in my life	3.0	3.2	2.87, p=.005
4	I often feel helpless in dealing with the problems of life	2.8	3.2	5.81, p<.000
5	Sometimes I feel I'm being pushed around in life	2.9	3.2	4.10, p<.000
6	What happens to me in the future mostly depends on me[11]	3.2	3.2	n.s.
7	I can do just about anything I really set my mind to do	3.2	3.2	n.s.
	Total Mastery Scale score	20.9	22.4	5.20, p<.000

Table 5.22 Relationship between low mastery at intake and graduation (N=140)

		Graduation		
		Low	Not low	Total
Intake	Low	15 (33%)	31 (67%)	46
	Not low	7 (7%)	87 (93%)	94
Total		22	118	140

Responses to each item of the mastery scale at intake and graduation are presented in Table 5.23 and it can be seen that very few of the respondents gave any responses (strongly agree for items 1 to 5, strongly disagree for items 6 and 7) that would indicate a very low level of mastery for that particular item at either time point. The percentage giving the next level of response, which would indicate a low level of mastery were reduced by half or more at the second application for all but the last two questions.

When respondents' ratings of how confident they felt about parenting and the future (the 10-point scale) were higher, their sense of mastery scale score at graduation was also higher (r = .33, p<.000), but their toddlerhood ratings were completely unrelated to their earlier intake mastery score (r = -.01). Neither of the other parenting scales was significantly associated with mastery at intake though there was a trend for more warmth at graduation to be associated with more initial mastery (warmth r = .51, p=.08; strictness r = -.03, p =.76). At graduation from FNP more warmth was associated significantly with more mastery (r = .36, p=.000) while a higher level of strictness was significantly associated with less mastery (r = -.41, p=.000). The level of parental distress at graduation was likely to be lower when reported mastery was higher (r = -.45, p<.000), lower when parenting warmth was higher (r = -.17, p=.043) and higher when strictness was higher (r = .27, p=.002).

[11] Scores for items 6 and 7 reversed so that agreement is scored higher than disagreement

Table 5.23 Percentage of interviewed FNP graduates giving each of four possible responses to the mastery questions at intake (I) and at graduation (G)

	Item	Strongly agree		Agree		Disagree		Strongly disagree	
		I	G	I	G	I	G	I	G
1	I have little control over things that happen to me	5	2	21	12	53	49	21	36
2	There is really no way that I can solve some of the problems I have	1	0	25	12	54	55	20	33
3	There is little I can do to change many important things in my life	2	1	15	10	63	58	20	31
4	I often feel helpless in dealing with the problems of life	3	1	31	10	50	57	16	32
5	Sometimes I feel I'm being pushed around in life	3	1	29	10	43	55	24	34
6	What happens to me in the future mostly depends on me	28	31	63	62	7	6	1	1
7	I can do just about anything I really set my mind to do	30	26	60	71	8	3	1	0

Child Behaviour Problems

The Strengths and Difficulties Questionnaire, 3 to 4 year old version (SDQ, Goodman, 1997), was used to find out about the behaviour of the graduating clients children. While not originally intended for children as young as two years of age the test developer indicated that this would be acceptable (Goodman, personal communication). The 25 item questionnaire has three choices for each behavioural description – not true (0), somewhat true (1) and certainly true (2) and provides a total behaviour problem score based on 20 items (range 0 to 40) and 5 scale scores covering hyperactivity, emotional symptoms, conduct problems, peer problems and pro-social behaviour, each with a range from 0 to 10. Total problems of 17 or more indicates 'abnormal' behaviour and each subscale has a different value indicating a markedly high level (or markedly low for pro-social behaviour; See Table 5.24) based on the 90th centile in the standardisation population. However it must be noted that these are based on the normative sample of children which did not include 2 year olds.

Overall the proportion is children identified as having marked behaviour or emotional problems is 8%, lower than one might predict in a general population sample which suggests that the children are developing well. However the 8% figure is probably a more accurate representation of the children's behaviour than the 2% identified at 24 months by FNs and parents completing the ASQ-SE (see Table 5.17). According to the SDQ the children were most likely to have conduct problems (such as temper tantrums disobedience or fighting), hyperactivity (behaviours such as being restless fidgeting or being distractible) and peer problems (being solitary, not having a best friend) but were very unlikely to have emotional problems such as fears, unhappiness or being clingy. The measure has as yet not been used widely with this age group so it is not possible to comment on whether the rate of conduct problems is different from the general population. However this kind of behaviour is typical two year old children.

Table 5.24 Mean SDQ total score and subscale scores (N=154)

	Mean	Range	90th centile or beyond	At or beyond 90th centile N (%)
Total SDQ score	9.9	0-25	17-40	13 (8%)
Hyperactivity	3.9	0-10	7-10	20 (13%)
Emotional symptoms	1.2	0-7	5-10	2 (1%)
Conduct problems	3.1	0-10	4-10	50 (32%)
Peer problems	1.8	0-8	4-10	22 (14%)
Pro-social behaviour	7.5	1-10	0-4	12 (8%)

The total level of child behaviour problems was likely to be lower if the Warmth score from the parenting measure was higher ($r = -.21$, $p = .01$) and if their mother's sense of mastery was higher ($r = -.28$, $p = .001$). Conversely child behaviour problems were likely to be higher if more stress was reported on the PSI Parental Distress measure ($r = .34$, $p <.000$) but they were not significantly related to reported strictness, although the trend was for mothers describing stricter behaviour to also report that their child had more problems ($r = .15$, $p = .10$).

Use of children's centres

One of the aims of FNP is to link young mothers up with other services in their communities and in England a particular focus has been on children's centres. Respondents were asked if they had visited a children's centre since completing visits from the FNP nurse or were intending to and almost half (69/155, 45%) responded affirmatively. They were then asked whether they had gone to a children's centre for any of 9 different services since completing FNP.

Just under one quarter of those interviewed (34, 22%) had been to the children's centre for one of the specified service, 10 for 2 and 15 for 3 or more activities (maximum 6). 10 had not yet been to any services listed but had been or were signed up to attend to a variety of other services such as cookery classes, a young mums group, the toddler play gym, a parenting group or PEEP. Details of the number who had recently used each of the nine specified services are given in Table 5.25. Neither the use of children's centres (yes/no) nor the number of children's centre services used was related to the parenting measures, to parental distress, to reported mastery or to child behaviour problems.

They were also asked if their FN had suggested the use of each of these services and the majority of children's centre use had been at their FN's suggestion, with a particular focus on mother and toddler play sessions. This is particularly important since teen mothers are often less likely to use parent groups or play sessions. It can be seen that some graduating clients visited children's centres to use mother and toddler play sessions without the FN suggesting them, to see their health visitor or to have their baby immunised (see Table 5.25 final column).

Table 5.25 Reported use of children's centre services since graduating from FNP and whether the use had been suggested by their FN (N=155)

Children's centre services	Used N (%)	Used at FN Suggestion N (%)	Used without FN suggestion N (%)
Mother and toddler play session	41 (26)	34 (22)	7 (5)
Child care	17 (11)	15 (10)	2 (1)
Appointment with health visitor	15 (10)	12 (8)	3 (2)
Employment advice or support	10 (6)	9 (6)	1
Child health clinic	8 (5)	7 (5)	1
Immunisations for baby	7 (5)	4 (3)	3 (2)
Drop-in child care	5 (3)	5 (3)	0
Appointment with specialist	5 (3)	5 (3)	0
Toy library	5 (3)	4 (3)	1

5.4 Conclusions

In their comments about clients, FNs highlighted empowerment and self-confidence, which may be one of the most important attributes that mothers take from the FNP. With that additional level of confidence, they can seek out the appropriate services for their child or children, can deal more effectively with relationship issues and can engage more fully with schools when their children are older. The FN views are subjective but quantitative evidence was available on this one aspect of their behaviour with 'mastery' questions posed at intake by FNs and after graduation by the research team. There was a significant increase in the average mastery score, that is their capacity to make decisions about their life and take charge of events, sometimes referred to as self-efficacy. More importantly the percentage of clients deemed to have low mastery using this particular questionnaire was halved between intake into FNP and graduation.

Many of the other outcomes cannot definitely be interpreted in relation to the FNP since there are not comparable data from such a unique group in terms of age and being first-time parents. However it is encouraging that many are using contraception, and using reliable methods such as the birth control pill, implants or injections. Not all say that they are using contraception every time they should, but they are likely to be better informed as a group than many young women about the options available to them. One third had become pregnant again during the two years since their first child's birth, on average after 10 months, and 13% had given birth to a second child before their first was two year sold, with a mean spacing of 17 months. Once data become available from the RCT it will become clear whether this represents an improvement on what would have happened without FNP. However the rates for second pregnancies and births are similar to or lower than those found for young women receiving the programme in US trials and lower than the rates in the US control groups, which is encouraging. From their comments, when a client gave birth to a second child FNs observed that the majority of the young women were well prepared for parenthood and predicted that they would cope successfully. This is reflected in the responses given by graduates who were interviewed. They rated their preparation for

parenting highly and described warmth and lack of harsh discipline. This should enhance the likelihood of good child development.

Developmental measures used with parents indicated that most children were at the level that would be expected for their age throughout programme delivery and if there were any issues, such as possible language delay, then these were likely to be identified and suitable referrals made. This was confirmed in relation to child behaviour with the interviewed graduates. The proportion displaying behaviour that might indicate difficulties was similar to normal populations although there was some evidence that oppositional symptoms might be of concern. This is likely for many children between 24 and 30 months but may have been a reason why some FNs continued to visit after the 24 month point. Enrolling for a nursery place at two will be important in the process of transition from FNP to other services.

The numbers becoming involved in education and employment look encouraging in that this group may be among the least likely to be able to gain employment, with child care to arrange and a preference for part-time hours. More than one quarter took part in some education after their child's birth, half of whom had not been in education at intake. It is difficult to make much comment on accidents that led to a visit to A& E or to hospitalisations. One might expect less with more attention to safety or more if mothers were learning to be more aware of when their child would benefit from medical attention. Again the RCT will show whether this is different for young parents not receiving FNP.

What is clear however is that some of the data were collected inaccurately. If a questionnaire asks both at 6 and 12 months if an event has taken place, then the response should be positive at 12 months if it was at 6 months, and this was not always so. Similarly the number of GCSEs changed at different time points, and not always upwards. If FNP teams want to collect local data to document progress they need to ensure that forms are filled in when they should be and that they are completed accurately. It may be useful for them to consult previous version of forms that are repeated, completing a draft version with previous information so that it can then be updated, since the information provided by clients may not be consistent. For example, it is more useful to say "six months ago you told me you had four GCSEs, have you gained any more since then?" than to simply ask "how many GCSEs do you have?" Then accurate information about the progress of clients can be calculated, likely to be very useful to present to commissioners.

Chapter 6. Resource Issues

FNP is an intensive programme; nurses have a small number of clients in their caseloads and work with them over an extended period of time. In the long term the cost of providing such a service is considered by commissioners in relation to the costs of other services, and the likelihood that predicted outcomes can be achieved so that its cost effectiveness can be established. It has been demonstrated from randomised controlled trial (RCT) data that the programme is cost effective in the US (Aos et al., 2004). For the evaluation of the programme's implementation in England the focus has been on the first issue, how much does it cost on average to provide FNP? This has been established by examining how FNs spend their time. In addition the evaluation has considered whether there are any particular issues for those FNs who work part-time, since this is not so usual in the US. The issue of the ratio of costs to benefits in the different service context of the UK NHS will be established from the ongoing English RCT.

6.1 Work diaries

Data in chapter 6 are based on work diaries completed over a two-week period in March 2010 by 43 Family Nurses in nine Wave 1 sites (two did not indicate their site, so are included in the totals but not in the more detailed breakdowns). The purpose of the diaries is to identify the different ways in which FNs' working time is committed, as they are performing a role which is not replicated elsewhere in the National Health Service. At one site (6) nurses did not complete diaries as the programme was in the process of winding down. The same diaries were completed by nurses in Wave 2a and data from FNs in Wave 2a are compared with Wave 1 in Chapter 7.

In 2007 and 2008 similar diaries were kept by the nurses in the first ten sites. In 2007 and 2008 the diaries were completed in November. In 2009 this was not practical as it fell during the period when clients were being recruited for the randomised controlled trial so activity was heavily distorted. March 2010 was selected as the month with the fewest distortions related to holiday periods or training and a time when the RCT recruitment should have been complete, but in fact it was still ongoing.

The format of the diary in 2010 was similar to that used in 2007 and 2008, with some fine tuning of the detailed categories to reflect the fact that in many programmes there was significant activity related to clients leaving. In addition to information about how they spent their time nurses were asked about their standard hours. Table 6.1 shows the average weekly time spent working by the nurses (i.e. excluding annual leave, meal breaks and time off in lieu). On average nurses worked 36 hours and 58 minutes a week, which was 5% more than their standard hours. Nurses worked around 20% additional time in 2007. To some extent this suggests that there has been a learning process going on with nurses spending some time in developing the skills to manage their workloads. However, one of the sites (2) still had a high level of working additional hours (26%).

Supervisors worked on average longer hours than FNs (38 hours 43 minutes), but were also more likely than FNs to work full-time. The proportion of standard hours worked by both groups was similar (see Table 6.1). Seventy percent of FNs and supervisors had standard full-time hours of 37.5 hours a week. Thirty percent worked part-time, ranging from 18.75 hours to 32.5 hours. Across all nurses the average standard hours were 34.4 hours a week.

Table 6.1 Weekly hours worked by Wave 1 Staff

	Actual hours: minutes	Proportion of standard
FNs	35:58	105%
Supervisors	38.43	111%
All Wave 1 staff	36:35	108%
FNs only		
Site 1	36:10	96%
Site 2	44:03	126%
Site 3	38:42	111%
Site 4	30:46	96%
Site 5	30:57	110%
Site 7	38:48	115%
Site 8	39:22	105%
Site 9	34:52	93%
Site 10	41:45	111%

6. 2 Caseloads

In addition to the information provided by FNS in their diaries, caseload information was available at various time points based on the forms submitted to the database. A standard full-time FN caseload is 25. Supervisors generally have between 4 and 8 clients on their caseload, depending on how many FNs they supervise and on their total number of hours worked. Normally the FN caseload would be a mixture of young women who are pregnant, those with young babies and those with toddlers up to the age of two. However, as a new programme, although the intakes were staggered, nurses generally had a cohort of cases recruited during pregnancy who were therefore more similar in stage than would be expected with a mature programme. Thus most (though not all) of the visits recorded in their most recent diaries will have been to toddlerhood clients.

Based purely on their average standard hours, the expected average number of clients per nurse would be 23.5. The actual number of clients per nurse at the time the diaries were completed was only 13.1. This is similar to the caseloads reported in administrative data. Table 6.2 shows the average caseloads at different points in time. The average caseload reported in the diaries in March 2010 is only slightly below the average caseload reported in the administrative data for January 2010 (13.8) and is above the level reported for July 2010 (11.0). This reflects the fact that Wave 1 sites were losing clients over this period, as they reached the end of their time on the programme and were not replaced because clients recruited to the trial were first allocated to newly recruited RCT Family Nurses.

Variations in caseloads reflect in part the lifecycle of the FNP programme at the different sites. Caseloads are low when programmes are new and clients are being recruited. They are also low when programmes are winding down as existing clients complete the programme and new clients are not being recruited to replace them. In March 2010 the second factor was particularly important. At their peak in early 2008 the first ten sites had average full-time equivalent caseloads of just over 20, compared with a target of 25, so they were running at roughly 80% capacity.

Table 6.2 Family Nurse and Supervisor average caseloads

Date	Average actual caseload	Full-time equivalent caseload[12]	FNs N	Super-visor caseload	Supervisors N
30 Sep 07	16.8	n/a	47	4.3	10
31 Jan 08	19.5	20.6	43	3.8	9
31 Mar 08	19.1	20.6	48	4.2	9
31 Jul 08	18.2	19.6	48	4.2	9
30 Sep 08	17.9	19.4	48	4.0	9
31 Jan 09	18.0	19.6	48	4.5	8
25 Mar 09	16.4	n/a	52	4.4	8
20 Jan 10	13.8	n/a	56	3.2	9
15 Mar 10[13]	13.1	14.4	30	3.3	7
13 Jul 10	11.0	n/a	56	1.9	8

Although supervisors' main responsibility is to supervise the work of the Family Nurses, they also have their own caseloads. On average supervisors who completed diaries reported caseloads of 3.3 in March 2010. Administrative data shows that supervisors typically had between 4 and 4.5 cases when site were fully operational. This is just under 20% of a standard Family Nurse caseload.

The issue of caseloads is central in terms of per capita costs. To the extent that individual sites are operating below planned capacity, the unit costs per client increase. The budgeted unit cost of the Family Nurse Partnership for a full caseload is around £3,000 per client per year. At 80% of operating capacity this increases by around £700 per case per year. But for sites operating with caseloads of 11, as they were doing in March 2010, the unit costs almost double to £5,400 a year. Families stay in the programme for an average of 19.5 months. Thus, the total cost with standard caseloads over the lifetime of a client participating is around £4,900 per family. With 80% caseloads it is around £6,000 per family over the full programme. The sites currently operating at caseloads of 11 previously had higher caseloads, as Table 6.2 shows. The average cost for most clients in those sites will have been £6,000, but during the wind down phase in Wave 1 it will have been higher due to the very low caseloads.

6.3 How do Family Nurses spend their time?

Client contact

The programme focuses strongly on the nurse-client relationship and the personal contact between the two. In 2008, Family Nurses spent 60% of their time on client contact in visits or other visit-related activity such as preparation, travel and notes (Barnes et al., 2009). In 2010 the proportion of time spent on client-related work had fallen to 43% (see Table 6.3) reflecting the fact, as discussed above, that caseloads were falling so that the opportunity

[12] Where part-time hours are known actual caseload has been adjusted to a full-time equivalent caseload. For some time periods actual hours were unknown for all nurses. At others, some nurses' hours were unknown, so the caseloads for these nurses could not be adjusted.

[13] March 2010 based on diaries, other data from data extracts.

for client-related activity was less. Specifically Family Nurses (excluding supervisors) spent just under a quarter of their working time in direct contact with clients, either on visits, or communicating by telephone or text (23%, see Table 6.3). In 2008 these activities had accounted for a third of their time. A further 20% of their time was in other client related activities (see Table 6.3).

The diaries identified 335 successful visits over the two-week period (by both FNs and supervisors when working directly as a Family Nurse). This represents an average of four visits a week for each FN or supervisor who completed a diary. This is a marked fall from 2008 when the average was 5.5 visits per week. The average length of a visit was one hour and twenty-eight minutes (88 minutes). This was almost identical to the visit length in 2008 (85 minutes). In 2007 the average length of a visit, based on the diaries, had been 75 minutes. However the average visit length from 2010 diaries is substantially longer than that obtained from the Home Visit Encounter forms for the toddlerhood period summarised in Chapter 2, which was 75 minutes for the toddlerhood clients. The difference may be in part due to the 15 minute segments of the work diaries compared to the more precise information on home visit forms or to the fact that some of their diary visits will have been to newer clients, not part of the original cohort recruited in 2007.

Nurses recorded 94 unsuccessful visit attempts, including those where the client cancelled by text message at the last minute. Where nurses are able to record productive alternative use of the time when a cancelled visit was scheduled the diary will not necessarily identify an unsuccessful visit attempt, so the ratio of unsuccessful to successful visits (roughly one unsuccessful visit for every four successful ones) is likely to be an underestimate. The unsuccessful visits took an average of 31 minutes, virtually identical to the 30 minutes recorded in 2008. Nurses recorded at least 193 episodes related to contacts with clients either by telephone or by text message (some diary entries refer to more than one telephone call or text message during a fifteen minute period) The calls or dealing with text messages lasted an average of 23 minutes each. In 2008 the average duration was 18 minutes.

In 2007 many Family Nurses had added comments in their diaries which referred to the long hours that they were putting in and the stress they felt from being contacted by clients when they were supposed to not be working (Barnes et al., 2008). However, in both 2008 and 2010 comments of this kind were rare.

Table 6.3 Proportion of Family Nurses' and supervisors' time spent on broad areas of activity

	Client contact	Other client related	Other programme specific	Non-FNP training	Other
Family Nurses	22.7	19.9	15.9	3.4	37.9
Supervisors	7.0	8.3	25.2	12.9	46.6
Total for Wave 1	19.2	18.0	17.5	5.2	40.2

Other client-related time

A fifth of Family Nurses' time (20%) was spent on activities associated with visits (preparation, travel and visit notes). In 2008 the proportion was higher at 26%.Travel is one of the main elements in contact-related time. The average length of travel time related to a visit to a client (successful or unsuccessful) was 20 minutes. Some visits require this amount

of travel time each way, but in many cases nurses did not start and end their journeys to visits at the same point, so that the journey after a visit might be to another client or to a team meeting. There were 581 journeys associated with 429 visits. Thus, the majority of visits required a one-way journey, while a quarter of visits required a double journey. Thus, travel time per visit is at least 20 minutes, but could be more if a visit cannot be combined with another journey and entails a round trip. Around a fifth of client-related time is accounted for by travel time. Average journey times in 2008 and 2007 were slightly longer (25 minutes).

Preparation for visits amounted to around 5% of total working time. This amounted to an average of 16 minutes per visit (whether successful or unsuccessful). In 2008 preparation per visit was higher at 22 minutes. This may reflect the fact that nurses have become more experienced, or it may also reflect the fact that as the client cohort matures some visits become more straightforward and require less preparation. The notes required by the FNP programme amounted to 7% of total time or 31 minutes per completed visit. This is higher than it was in 2008 when it was 26 minutes per completed visit. Thus, for every typical hour and a half visit, there is at least 20 minutes of travel, 16 minutes of preparation and 31 minutes of notes, or just over an hour's additional work associated directly with the visit.

Other Programme-specific time

Some elements of what nurses do are specific to the protocols of the Family Nurse Partnership programme. These elements accounted for 16% of nurses' time (see Table 6.3). In 2008 it had been 12%. The equivalent figure in 2007 was 20% reflecting the fact that nurses have a large amount of programme specific training when they first start working on the programme. In a mature programme this accounts for a relatively small proportion of time, but in a new one it is more significant. A key element of the increase was work related to clients leaving the programme. Administrative work and meetings related to leavers accounted for 6% of nurses' time. Other elements include individual and group supervision (4% of working time), and team meetings (3% of all time). Both these figures were similar to those in 2008 and 2007.

Non-FNP training

There was a reduction in the proportion of time accounted for by training and personal development not associated with the Family Nurse Partnership. In 2010 this accounted for 3% of available time (see Table 6.3) whereas in 2008 it had accounted for 7%. Around a third of this was mandatory training while the remainder was other professional development. However, supervisors spent 13% of their time in 2010 on non-FNP professional training and development.

Other time

Family Nurses spent just over a third of their time (38%) on other activities (see Table 6.3). These included administration, meetings, work with clients that is not an FNP visit (for instance Family Nurses deliver the Health Child Programme for their FNP clients and have work related to this role) as well as breaks, sick leave, annual leave and time off in lieu.

Breaking down the 38% time spent on 'other' activities, around 13% of Family Nurses' time was spent on activities which are outside the core FNP programme: non-FNP notes, meetings other than FNP team meetings, and travel not associated with visits, work on other jobs (where FNs have dual roles). These are activities which are likely to be an important part of the nurses' wider role as professionals working within the National Health Service. In

2008 this work accounted for 10% of FNs' time. The small increase in the proportion of time devoted to these activities is likely to be a reflection of reduced client caseloads.

Other work accounted for 12% of the time spent on other activities. This includes some categories such as administration which is related to the FNP programme, and other categories such as liaison with other professionals which crosses both FNP responsibilities and wider responsibilities. In 2008, this category accounted for 15%. Nurses spent 3% of their working time in consultation with others (case conferences, and discussions with GPs, social workers, Connexions and other agencies). They spent 6% of their working time on administrative tasks and 3% on unclassified activities. These were similar to previous years.

The remainder (13%) was accounted for by non-working time, which was higher than in 2008. However, one factor accounting for this was that some Family Nurses took annual leave during the diary period because they had to take it before the end of the financial year or lose it. Thus, a higher than normal proportion of nurses took leave in order to use it up.

6.4 Cost-effectiveness issues

It is intended that the cost-effectiveness of the Family Nurse Partnership will be investigated more fully as part of the randomised controlled trial which is currently in progress. Currently, it is not possible to relate resources to input issues to outcomes in order to consider cost-effectiveness or cost-benefit issues.

A fundamental part of the rationale for the Family Nurse Partnership programme, both in the USA and in England, is the economic case for early intervention. The children of disadvantaged teenage parents have a much higher probability of being on an expensive path through life than do other children. This probability is increased where parents have a history of using drugs or alcohol, or have experienced abuse. Such problems are relatively common among the FNP parents in England. These children are at significantly higher risk of conduct disorder, special education, poor educational attainment, anti-social behaviour, offending, substance use, and early parenthood.

The randomised controlled trial currently in progress will measure the outcomes of the Family Nurse Partnership in England and any associated economic benefits. In the US trials of the Nurse Family Partnership the main economic benefit comes through breaking the cycle of disadvantage experienced by the children of teenage mothers. In both Britain and the US the children of teenage have relatively poor school performance, a higher risk of delinquency and greater probability of becoming teenage parents themselves. In terms of lifetime costs these are potentially expensive outcomes.

A systematic review of the costs and benefits of early intervention found that in the US the Nurse Family Partnership costs just over $9,000 per child, but yielded an average benefit of more than $26,000 per child (Aos et al., 2004). A second study by the same team (Aos et al., 2006) found that crime reduction was an important contributor to the benefit. Crime is expensive for victims, for the state which has to investigate, prosecute and fund sentences, and for those who offend in terms of reduced earnings potential.

Some of the costs of these adverse outcomes are borne by public funds, but many of the costs are borne by the teenage mothers and their children in later life, and by the rest of society. Some of the costs, particularly the cost of offending, and the cost of poor mental

health for both parents and children, are high. But the majority of the costs are not borne by health services. Rather they are borne by the whole of society in terms of lost output, by the parents and children in terms of lower earnings, and by victims of crime. However, a reduction in the incidence of many of the adverse outcomes that have been identified is likely to yield savings over long period as the children of the teenage parents move into adolescence and adulthood.

6.5 Conclusions

It is less likely than it had been in earlier phases, especially in pregnancy, that FNs work more than their assigned hours although there are still some sites where that appears to be more common. The level of part-time working among Family Nurses remained stable at around 20 per cent of the total in both 2010 and 2008. This is lower than it was initially. In 2007 around a quarter of FNs worked part time. The stability after an early reduction suggests that sites have developed methods that ensure that people who want to work part time can be included in the programme. However, due to the nature of the relationship with the clients, based in part on availability, full-time work as a Family Nurse is preferable.

While hours of working are on average slightly over 100% the average caseload of the Wave 1 FNs was low at the time that the diaries were completed, about half of what would be expected. This would add substantially to the cost of the programme if it became a pattern in other waves. It may be related to a number of factors but principally a large number of clients will have reached the point of graduation, but at a time when recruitment was being affected by the slower process involved for recruiting to the RCT.

Related to the reduced caseloads, the FNs were less likely than in previous work diaries to spend their time either in direct contact with clients, or in activities related to these contacts such as planning for visits or travelling. In 2010 it fell to less than half of their time. They spent more time than in previous years in programme specific meetings, supervision or training and supervisors in particular also spent a substantial amount of their time in non-FNP related training. Presumably the teams were compensating for the lower caseloads by refining their skills and enhancing the materials. As their original clients graduated and they waited for clients some also took on other duties with the PCT. The amount of time spent on non-FNP activities indicates that there are still many aspects of being part of the NHS that need to be attended to such as notes or meetings, but also may have been distorted by collecting the information close to the end of the financial year when some FNs were taking time off that would otherwise have been lost.

As yet, until the RCT has findings, there is no evidence about the outcomes of the programme for parents and children, but the scope for generating positive net benefits remains high.

Chapter 7. Comparisons of Wave 1 and Wave 2a in Pregnancy and Infancy

The experiences of the first cohort of clients in the Wave 1 sites may not be typical of subsequent clients in those sites or of clients recruited in the subsequent sites. Not only was the programme completely new to England when they were enrolled, in 2007, it was new to all the nurses and supervisors, and clients were recruited with a tight timetable, meaning that there was little chance for nurses to become familiar with the programme materials, or to develop a good infrastructure centrally for training nurses and collating programme delivery data. The programme has become more bedded down in England and the newer sites have benefitted from the learning of the wave 1 'pioneers' so it is useful to look at whether any aspect of delivery in the second wave of 10 sites (2a) differed in any way from Wave 1.

7.1 Pregnancy

Comparing the mean of number of expected visits received by clients, Wave 2a sites delivered more of the programme in pregnancy than Wave 1 sites. Specifically they completed on average more visits per client (8.2 vs. 7.3, $t=6.35$, $p<0.001$); more visits were expected per client on average (12.1 vs. 11.1, $t=6.91$, $p<0.001$), which is an indication of less attrition; a greater percentage of expected visits was delivered on average (69.1 vs. 65.6, $t=3.34$, $p<0.001$); and a greater proportion of clients receiving the stretch objective of 80% or more of their expected visits (35% vs. 30%, Chi Square = 8.3, d.f. 1, $p<0.01$) (see Appendix E, Table E1 for full details by site). The distribution of the proportion of expected visits delivered is relatively similar for the two waves (see Table 7.1) but almost twice the percentage of clients (5 vs. 8) received 90 to 99% of visits and fewer received very few while similar percentages received more that the expected number of visits (see Figures 7.1 and 7.2)

Table 7.1 Distribution of the percentage of expected visits delivered in pregnancy in Wave 1 and Wave 2a for all clients

% expected pregnancy visits received	Wave 1 N	%	Wave 2a N	%
0%	5	0.4	2	0.2
<10%	7	0.5	20	1.9
10-19%	44	3.4	27	2.5
20-29%	78	6.0	42	3.9
30-39%	96	7.4	54	5.0
40-49%	68	5.2	72	6.7
50-59%	145	11.1	104	9.7
60-69%	239	18.3	174	16.2
70-79%	234	18.0	199	18.6
80-89%	194	14.9	160	14.9
90-99%	63	4.8	89	8.3
100-119%	111	8.5	107	10.0
120+%	19	1.5	22	2.1
Total	1303	29.7>=80%	1072	35.3>=80%

The manner of delivery in pregnancy differed between Waves 1 and 2 in the following ways: despite delivering more visits the mean visit length was longer in Wave 2a sites (81.5 vs. 74.0 minutes), t = 13.26, p<0.001), more time was spent on average in Wave 2a sites on the maternal role (25.8% vs. 24.3%) and life course (12.1% vs. 11.2%), t = 5.58 and t = 4.97, both p<0.001) while more time was spent on average in Wave 1 than Wave 2a sites on Family and friends (16.1% vs. 15.0%) and environmental health (13.1% vs. 11.3%, t = 5.32 and t = 8.44, both p<0.001; see Appendix E, Table E2 for full details by site).

There were also some small differences on average in the ratings made by FNs about Wave 1 and Wave 2a clients. Wave 1 clients were rated by FNs on average as more involved (4.7 vs. 4.6, t = 2.88, p <0.01); Wave 2a clients and their partners were rated as showing more conflict with the materials (clients 1.23 vs. 1.18; partners 1.3 vs. 1.2, t = 2.61 and t = 3.30, both p<0.01 (see Appendix E, Table E3).

Figure 7.1 Distribution of the percentage of expected pregnancy visits received, Wave 1, including clients who left in pregnancy (N=1303)

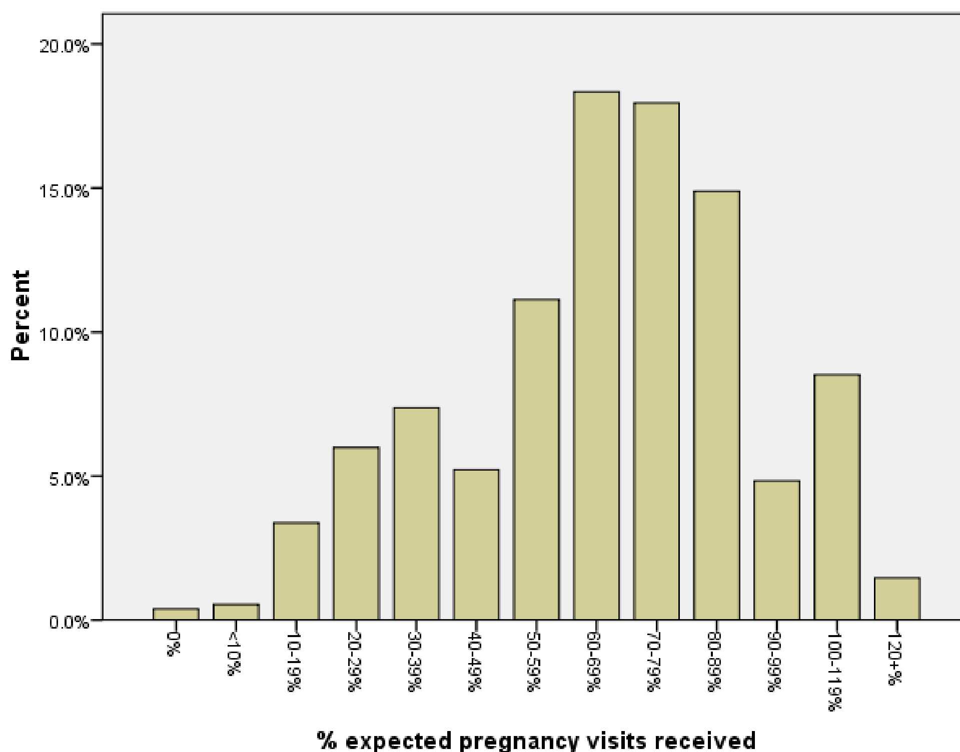
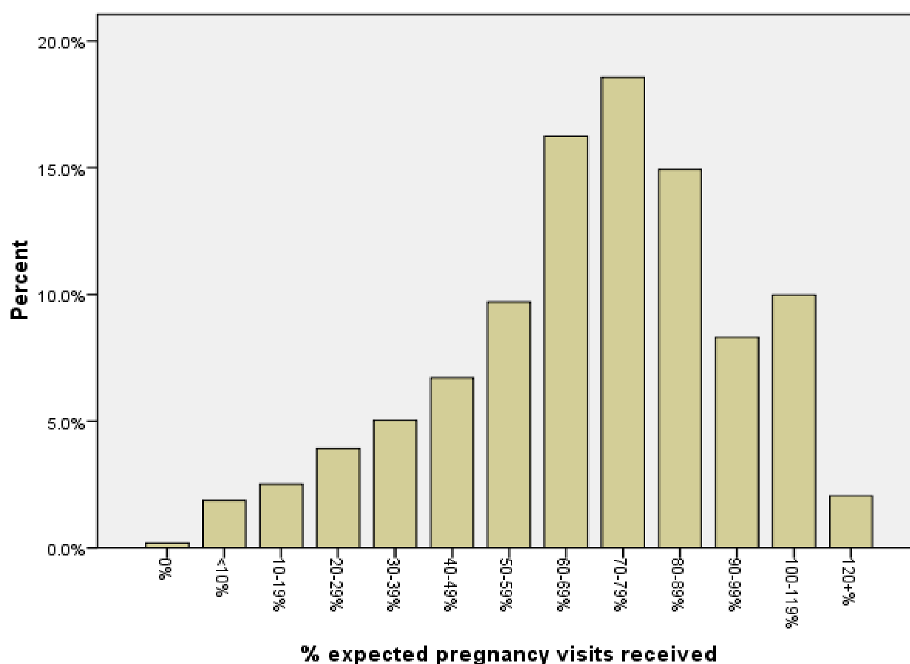


Figure 7.2 Distribution of the percentage of expected pregnancy visits delivered, Wave 2a, including clients who left in pregnancy (N=1072)



7.2 Infancy

Comparing the wave totals, Wave 2a also delivered on average more of the programme in infancy than Wave 1 sites (see Appendix E, Table E4). Specifically the Wave 2a sites delivered more visits per client on average (12.8 vs. 16.0, t=7.34, p<0.001); more visits were expected per client (22.1 vs. 26.8, t=8.76, p<0.001); a greater percentage of the expected visits was delivered on average (55.0 vs. 57.7, t=2.03, p<0.05); and a greater proportion of clients receiving 80% or more of their expected visits (44% vs. 36%, Chi Square = 8.99, d.f. 1, p<0.01). It is important to note that the mean number of both expected and delivered visits in infancy is influenced by attrition in pregnancy. Attrition in Wave 1 was substantially higher than that in Wave 2a in pregnancy (14% vs. 2%, see Table 7.3) so fewer clients expected no infancy visits and received no visits.

In infancy the pattern of the distribution of expected visits delivered is slightly different. Wave 2a sites delivered the expected level (65% or more) of visits to a greater proportion of clients with the difference largest in the 75 to 84% and 85 to 94% bands. However they also had a larger percentage who received very few visits (see Table 7.2 and Figures 7.3 and 7.4). This is probably due to the new system of keeping clients on their caseload (but identified as inactive) rather than identifying them as a leaver until they have not been visited for six months. In Wave 1 sites it was possible to identify these clients as leavers after only a month or two of missed appointments. This is reflected in the attrition levels (see Table 7.3).

Table 7.2 Distribution of the percentage of expected visits delivered in infancy in Wave 1 and Wave 2a for all clients

Proportion of expected infancy visits received	Wave 1 N	%	Wave 2a N	%
0%	46	4.1	41	8.5
<15%	22	2.0	15	3.1
15-24%	42	3.7	17	3.5
24-34%	78	6.9	21	4.3
35-44%	167	14.9	25	5.2
45-54%	148	13.2	44	9.1
55-64%	214	19.0	107	22.1
65-74%	207	18.4	85	17.6
75-84%	117	10.4	68	14.0
85-94%	52	4.6	38	7.9
95+%	31	2.8	23	4.8
Total	1124	36.2>=65%	484	44.2>=65%

Figure 7.3 Distribution of the percentage of expected infancy visits received, Wave 1 (N=1124)

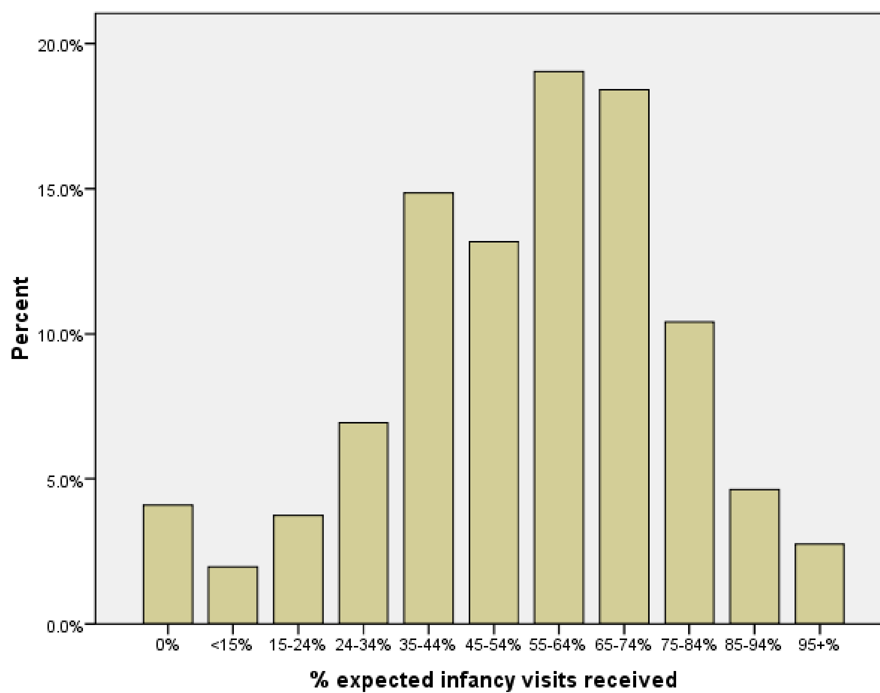
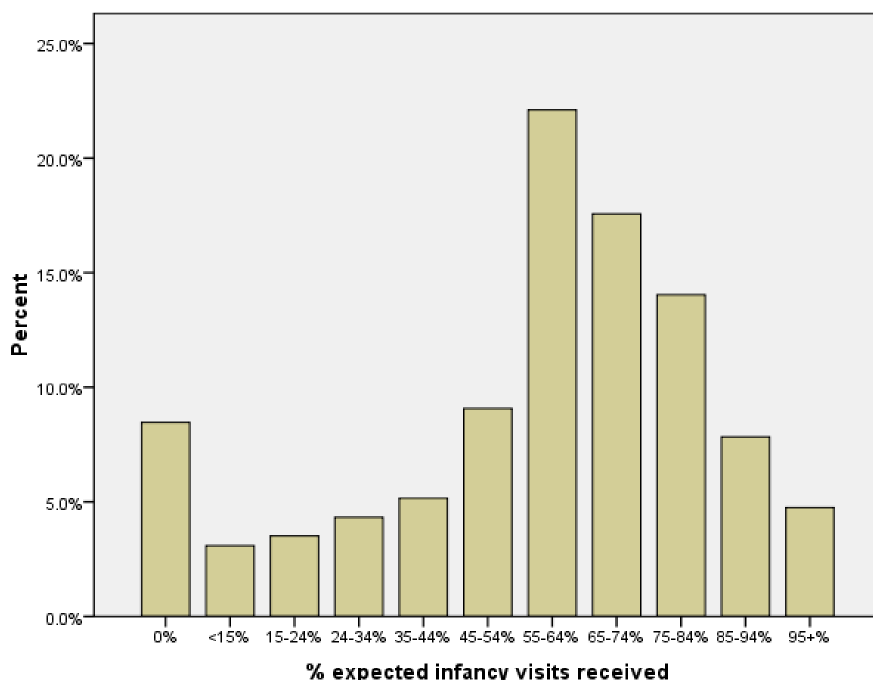


Figure 7.4 Distribution of the percentage of expected infancy visits delivered, Wave 2a (N=484)



The manner of delivery in infancy also differed between Waves 1 and 2 in the following ways: the mean visit length was longer in Wave 2a sites (77.4 vs. 74.3 minutes, t = 4.60, p<0.001); more time was spent in Wave 2a sites on life course (12.2% vs. 10.8%, t = 6.96, p<0.001); more time was spent in Wave 1 sites on the maternal role (42.1% vs. 40.7%, t = 3.29, p<.01) and family and friends (13.6% vs. 12.8%, t = 3.73, p<0.001). There were some small differences on average in the ratings made by FNs about Wave 1 and Wave 2a clients during infancy visits: Wave 2a clients and their partners were rated as showing more conflict with the materials (clients 1.24 vs. 1.16, t = 3.47; partners 1.3 vs. 1.2, t = 3.98; both p<0.001).

The mean number of intake vulnerabilities for clients in each wave was compared, including only those with complete data on all eight items since data were complete for a greater percentage of the Wave 2a clients (666/1303 of Wave 1, 51%; 804/1072 of Wave 2a, 75%). Comparing these smaller groups there was no significant different in the number of vulnerabilities (Wave 1 2.2, Wave 2a 2.3). There was however a significant difference in the distribution of the number of vulnerabilities, with more in Wave 2a having a moderate number while more in Wave 1 had none or many (see Table 7.3).

Table 7.3 Number of intake vulnerabilities in Waves 1 and 2a (percentages in brackets)

	None	**1 or 2**	**3 or 4**	**5 to 7**
Wave 1 N=666	71 (11)	332 (50)	210 (32)	53 (8)
Wave 2a N=804	51 (6)	420 (52)	299 (37)	34 (4)
Chi Square 20.51, 3 df, p<.0001				

7.3 Attrition

Attrition has been compared in Waves 1 and 2a first for the total client group and then to present a more accurate picture of infancy only for those clients whose child has reached 12 months. Only one Wave 2a client's child had reached 24 months, a client who had transferred after moving from a Wave 1 programme area, so toddlerhood is incomplete for Wave 2a clients. However both on the basis of the total group and for those who have completed infancy attrition is significantly lower in Wave 2a, particularly in pregnancy where it is only 2% compared to 14%, but also in infancy (see Table 7.4). The Wave 2a leavers include clients who have been deemed inactive (not an option initially for Wave 1 clients) in that they have not been in contact with the programme for 6 months so the eventual level of attrition may be even lower if inactive clients are later re-engaged. The inactive clients represent 11 of the 26 pregnancy leavers (42%), 64 of the 117 infancy leavers (55%) and 10 of the 17 toddlerhood leavers (58%).

Table 7.4 Rates of attrition by phase in Wave 1 and Wave 2a

Status	Wave 1 N=1303	Wave 2a Completed pregnancy N=1072	Wave 2a completed infancy N=495
Leave pregnancy	179 (14)	26 (2)	11 (2)
Leave infancy	258 (20)	117 (11)	65 (13)
Leave toddlerhood	97 (7)	17 (2)	17 (3)
Non-leaver	769 (59)	912 (85)	402 (81)
Chi Square vs. Wave 1		215.08 p<.0001	90.13 p<.0001

7.4 Location of visits

The FNP is predominantly a home-visiting programme and this is evident overall in both waves. However in both waves there are some sites where less than 70% of visits have been in the client's home (see details in Appendix E). There has been an increased focus on linking FNP with children's centres since it was introduced in April of 2007. It can be seen that Wave 1 visits are much more likely to be in a children's centre in toddlerhood than in the previous phases which might be interpreted as a means of helping graduating clients to become familiar with the services available at the centres (see Table 7.5). However in Wave 2a a similar percentage of visits (between 2 and 3% on average) are delivered in a children's centre in each phase, with sites making up to 11% of their visits in children's centres rather than at home. Wave 2a visits are also more likely to be in other community locations than those delivered in Wave 1 sites.

Table 7.5 Location of visits by wave and phase (percentages, whole numbers for 10+ %)

Wave	Client's Home	Family, friend	Children's Centre	Doctor, Clinic	Community	School, college	Other
1 N=36219							
Pregnancy	86	7.7	0.2	0.9	0.1	0.4	4.5
Infancy	84	8.3	0.5	0.6	0.4	0.1	5.5
Toddlerhood	85	5.8	2.7	0.5	1.6	0.1	4.0
TOTAL	85	7.5	1.0	0.7	0.6	0.2	4.8
Site range	61-95	2.7-30	0-5.9	0-2.5	0-4.1	0-1.3	1.4-9.2
2 N=25161							
Pregnancy	84	7.8	3.1	0.7	1.9	0.4	2.5
Infancy	84	7.7	2.2	0.5	1.6	0.2	3.9
Toddlerhood	81	7.5	2.8	0.9	2.7	0.4	4.6
TOTAL	84	7.8	2.6	0.6	1.8	0.3	3.4
Site range	69-92	1.7-23	0-10.7	0-4.1	0-8.6	0-1.5	0-9.1

7.5 Resource issues

Wave 2a FNS completed work diaries in the same two weeks of March 2011 as those in Wave 1. The format was identical for both waves.

Working hours
Nurses in Wave 2a sites were less likely than those in Wave 1 sites to work part-time. In Wave 1 sites 28% of FNs worked part-time, while only 17% of Wave 2a nurses did. This is reflected in the average standard working week. In Wave 1 sites it was 34 hours 21 minutes, while the average in the Wave 2a sites was 36 hours and 12 minutes. This lower rate of part-time working in the newer sites is likely to reflect in part the early experience of nurses in Wave 1 sites. Those who worked part-time often found it difficult to balance the relationship with the clients, which is based in part on being accessible, with their non-working time.

In addition to their higher number of standard hours, nurses in the newer sites were working a higher number of hours above their standard hours (15%) than nurses in the original sites (8%). However, this is still below the 20% additional hours worked by nurses in the Wave 1 sites in the first year, 2007. In Wave 1 sites, the working of additional hours went down over the lifetime of the programme.

Caseloads
The caseloads in Wave 2a sites are significantly larger than those in Wave 1 sites. As discussed in Chapter 6, Wave 1 caseloads have been falling as clients leave the programme at the end of their time and are not replaced with new clients. At the time when the diaries were completed in March 2010, the average caseload in Wave 2a sites was 17.9 while the average caseload in the Wave 1 sites was 11.1. The current caseloads in Wave 2a sites are similar to the caseloads in Wave 1 sites in 2008, when the programme was fully operational and before recruitment to the RCT had started.

In fact, in terms of programme lifetime, in March 2010 Wave 2a sites were at a comparable stage to that of Wave 1 sites in 2007, so they appear to have built up their caseloads more quickly. This might reflect some learning from the experience of the earlier sites about the

process of recruiting and retaining clients, reflected in the lower rates of attrition described. But it also reflects differences in hours. Based on standard hours worked, Wave 1 sites have an expected caseload of 22.9 while Wave 2a sites have an average expected caseload of 24.1.

Thus, the difference between fully operational Wave 1 and Wave 2a reflects to a large extent differences in hours worked by the Family Nurses in the two groups of sites. If Family Nurses' working hours and the reduced caseloads of supervisors are taken into account, a standard caseload across all sites should be 20.3. In March 2010 Wave 2a sites were operating at close to 90 per cent of this level, while Wave 1 sites were operating at only 50 per cent.

Allocation of time (Family Nurses only)
Family Nurses in Wave 2a sites spent a higher proportion of their time on client contact and client related activities (see Table 7.6). They spent 61% of their time on client contact or client-related activities, which was similar to the proportion of time nurses in Wave 1 sites spent on this work in 2008, but was much higher than the proportion nurses in Wave 1 sites spent on this work in 2010 (43%). This is likely to reflect differences in caseloads. Nurses in Wave 2a sites undertook 760 successful visits over the diary period (8 per nurse per week on average), while nurses in Wave 1 sites undertook 335 successful visits (4 per nurse per week).

Table7.6 Proportion of time spent on different activities by Family Nurses (excluding supervisors) by wave

	Client contact	Other client related	Other programme specific	Non-programme training	Other
Wave 1	22.9	19.9	15.9	3.4	37.9
Wave 2a	36.7	24.6	12.0	2.7	24.0

7.6 Conclusions

Evidence from delivery in pregnancy and infancy in Wave 2a sites suggests that they have gained from the experiences of the Wave 1 sites. It could have been predicted that they might deliver less since they were not so 'under the microscope' as the Wave 1 pioneers of FNP in England. However they have shown that they are able to progress more smoothly, with enhanced training materials and more preparation within sites in terms of administration and infrastructure. They are delivery a greater percentage of expected visits and attrition is substantially lower. Their client group is slightly different; fewer have no risk factors at intake while fewer also have many. Thus it may be more impressive that attrition is low since these are the two groups that were retained most successfully by the Wave 1 sites.

The FNs in Wave 2a have caseloads that are closer to the recommended 25 for a full time nurse and are making more visits on average per week that Wave 1 nurses. The extent to which the time of Wave 2a FNs is spent in client contact or visit related activities is similar to that observed in the previous year in Wave 1. Attention should be paid to the Wave 2a caseloads as more of their clients reach graduation so that this dip in caseloads does not become a pattern.

Chapter 8. The Future

8.1 Supervision

As an integral part of the programme FNs receive supervision from the team supervisor individually and as a team on a regular basis. In toddlerhood FNs reported that the content of group supervision often widened beyond discussions of individual cases to include issues like child protection, developments in programme materials and communications from the National FNP Team. This extension of teamwork to more general matters and to common problems was valued. In these explorations groups might use role play:

> *"Someone has a go being the nurse and you can say 'When you said that it didn't make me feel any better' – give each other that kind of feedback."*

However, in some areas it appeared that this sort of exploratory activity had reduced over time, and some FNs felt that supervisions were too long, though they still liked the regularity of input from the team. The main reason they appreciated this was the opportunity to review their own work with colleagues.

> *"We all have different strengths and abilities."*

Nurses were in general more positive about their individual supervision and felt they still needed it.

> *"Certain cases I take to supervision more than others. I talk about the data – I find that really useful."*

An element of support has been added to the programme as developed in the US, where the supervision of nurses is provided exclusively by the team's supervisor. In England local clinical psychologists have been involved, both to provide support to the supervisor and also to be present in some of the group supervision sessions with the whole team. FNs and supervisors reported that group supervision with the local psychologist had been helpful when teams experienced the loss of a member for any reason. Supervision addressed the dynamics of the team and feelings such as anger and regret about the member's leaving. Interestingly, some supervisors suggested in their interviews that they found new staff more amenable and open to supervision sessions in comparison with the pioneer FNs. This may be because the Wave 1 supervisors tended to be seen by the first Wave 1 FNs as on a par with them in knowledge of FNP, having no particular expertise with which to supervise them. Comments to this effect were reported at previous stages of the programme. FNs and supervisors had been trained together and the supervisors had no more programme experience than FNs: slightly less, in fact, since their case loads were much smaller. This contrasts with the situation in the US where a large number of experienced nurses are available when it is necessary to recruit a new FNP supervisor. This issue should become less of a problem as the number of sites offering FNP grows and more Family Nurses have built up several years of experience.

The support of the local psychologist was considered important in all the sites. While much of the supervision from the supervisor focussed on the programme, the best materials for a particular client, or how to manage specific situations, the psychologist provided personal support for work that many FNS have described as very stressful:

> *"I think it (supervision from the psychologist) has had a big impact on how we feel when we go on these visits, not taking things so personally. It's not so draining when you understand why."*

Another FN described how the psychologist provided affirmation of her work:

> *"It has reassured me that there is actually no more I could be doing."*

And it sometimes ensured that FNs could focus on the central issue:

> *"It is incredible really, we are very lucky, she brings the focus back on the child for us."*

There have been hiccups in this supervision, usually when there has been a change in psychology staff. The need to work with new psychologists so that they could understand FNP had brought home to FN teams how different the FNP approach was, and how other practitioners needed to be informed about the aims, content and practices of FNP in order to be able to work with it.

> *"Initially it was difficult, and it wasn't us, it was how the psychotherapist and psychologist ran it. They now understand us and the programme."*

This has also been an issue when interpreters need to be involved in programme delivery. Full details of that topic can be found in Barnes et al., 2010a and Barnes et al, in press).

8.2 Team stability

The importance of team stability and cohesion was highlighted in a previous report (Barnes et al., 2009). FNs had left the programme at pregnancy and infancy stages, usually for personal reasons: they could not continue with the working hours required for FNP or they had had disagreements with their supervisor and these have been documented in previous reports. The FNs who left the programme during delivery of the first toddlerhood clients were contacted to discuss their reasons and others were asked about whether or not they saw their role in the FNP as sustainable over the long term.

FNs from Wave 1 who left FNP at the toddler stage did so for two main reasons. Either they had applied for a supervisor's post in one of the new sites and had not been successful or they wanted to return to their previous role This could be because they missed their previous work such as health visiting or midwifery which might offer more variety, with clinic and groups work as well as home visiting and with a wider range of clients. Those who were considering the return to health visiting also felt that it lacked a particular kind of stress and personal pressure that came from intimate and profound involvement in the lives of clients, and the scrutiny of working to objectives. In the following exchange an FN who was planning to leave the programme to return to health visiting talked about her reasons for doing so:

> *"It has been a mixture of things. It has been good in that any new experience is good, and I don't think you would have got that level of working with clients in health visiting. And it has been good to work with the team, all learning together…but sometimes I think for my own self the emotional cost has been too high."*

This nurse noted how difficult some of the situations an FN encountered could be:

> *"It is very hard knowing how best to support them* (clients) *and sometimes – this may not be a professional thing to say – sometimes it brings up things in your own life and you have to deal with that. It is because this programme goes so deep."*

She described how she was constantly concerned about her clients:

> *"Sometimes, even before I get out of bed in the morning I am thinking about my clients, thinking 'Who am I going to see today and what am I going to do for that girl? Am I good enough to do what that girl needs?' And I think 'Oh dear, this is getting really heavy'."*

This FN had always enjoyed health visiting, though she thought that her health visiting practice would be likely to be affected positively by her FN experience, especially by learning the PIPE materials. But she had also found that as an FN she was also a health visitor, during infancy and toddlerhood, and that her clients had valued that particular (non FNP) aspect of her role, that they:

"Do like me sometimes to be a health visitor, they like to see their babies weighed and they like advice about feeding and so on."

The departure of an FN causes obvious difficulties for the site. The nurses who remain have to take on the clients, either temporarily or until they graduate. Clients in the toddler stage will have in all likelihood established a strong relationship with the departing FN. It is then necessary for them to build a new therapeutic relationship and supervisors have to ensure that the members of the team who remain do not become over-burdened. Although it would be better to recruit a new member of the team in this situation, this is not always possible at the toddlerhood stage, and always difficult with a programme that is structured – and currently on such a small scale. There is as yet no pool of trained FNs from which to recruit. The newly recruited and trained RCT nurses, present in eight of the 10 Wave 1 locations, have been able to help in some sites since they had capacity as the RCT sample was being recruited. This extra capacity will not be present in the future so the issue of how to retain clients when FNs leave will be an important ongoing issue.

8.3 The Family Nurse role

Nurses remained content with their roles and with the current progress of FNP, except in the one site where the programme was ending. In other areas some concerns about the future of the programme were expressed, but on the whole FNs sounded more secure at the toddlerhood stage than they had done when they first embarked on the programme. Several FNs did recall the anxieties they had felt at the first stage of the programme, when they were trying to recruit clients (and wondering if they could) as well as trying to master programme materials and techniques. The stress had eased, though many still found themselves working long hours to ensure that they kept up with paperwork and required visits. Some FNs were concerned about the progress of the RCT in their area, commenting on the low level of recruitment and the consequent effect on their own caseloads, which would not be full. Some wondered if this might jeopardize future funding for the programme from the PCT. *"My great worry is the RCT, because it is not going as it should have done and is making everything incredibly expensive."*

Some FNs did feel insecure, wondering if there would be funding to continue the work. Since these interviews were conducted early in 2010, it is likely that they feel even more threatened nine months later. In the one site where the service was coming to an end the three remaining nurses had thought a great deal about why this was happening:

"I feel very sad about finishing. I think it is a mistake that the commissioners have made. It is a short-term answer….the position of the commissioners, the reason we have been given, is that it is a workforce issue. (There is a shortage of health visitors in this area). *But I think there are other reasons*."

A report on this area and the potential 'other reasons' has already been produced by the FNP pilot sites evaluation team and will be summarised in a final integrated report due to be published in the coming months. One of the team members does, however, succinctly describe the impact that it has had on her working life to be able to work intimately and successfully with a small number of new parents and in particular being able to know about their progress over an extended period of time rather than dipping in and out of the lives of families:

"It makes me feel exceedingly sad. This has not been an ordinary job. It is not like that at all – it has taken in so much of ourselves. We have given so much of ourselves to the FNP – willingly. I have loved it. I will become a health visitor, which is fine. I

enjoyed health visiting previously and I know I will fall back into it…Now my clients are coming to an end I can really see how well they have progressed. I have been so proud of them – then to go to a caseload of 300-400 where I am skimming the surface!"

8.4 Lessons for subsequent waves

There are currently another 45 FNP sites around the country (House of Commons 2010) with more expansion planned in the future (DH, 2010b). However few of their clients will have entered toddlerhood and none have completed it. Thus there may be many important lessons to be gained from the experience of the Wave 1 'pioneer' teams. First and foremost for the Family Nurses it is clear that much has been gained by taking on this new role. Not only has professional satisfaction been related to all the new skills but it has allowed nurses, many of whom had worked with vulnerable groups such as those in Sure Start Local Programme areas, but as health visitors or midwives (Barnes et al., 2008) to see many of their young clients flourish as parents, and gain in confidence as they thought about what lay ahead of them in life. Secondly, while important lessons already appear to have been learned about retaining clients in pregnancy and infancy, on the basis of the Wave 2a experience, the most important lesson from toddlerhood may be to provide FNs with more strategies as they work through the ending process, when it is necessary for clients to leave the programme as their children reach 24 months of age.

In conclusion, the outcomes for the young mothers themselves and their children look promising. However, this report described the findings of a process evaluation, not an impact study. Where outcome information has been reported there are no good comparison data for this rather specific group of first-time, predominantly teenage mothers or their children. On the basis of the comments made by the nurses and on the descriptions of their own status from programme graduates it appears that this programme has successfully transferred from the USA to England with the likelihood that there will be evidence of positive outcomes. The findings of the RCT in England will be eagerly anticipated, to confirm these initial impressions.

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Appendix A. Client vulnerabilities at intake by site

Table A1. Number of vulnerabilities at intake for clients whose child age would be/was at least 24 months by site (percentages in brackets)

Site	N	None	1 or 2	3 or 4	5 to 7
1	100	11 (11)	52 (52)	30 (30)	7 (7)
2	104	18 (17)	56 (54)	27 (26)	3 (3)
3	174	24 (14)	97 (56)	44 (25)	9 (5)
4	132	18 (14)	68 (52)	36 (27)	10 (8)
5	103	17 (17)	65 (63)	18 (18)	3 (3)
6	93	11 (12)	53 (57)	24 (26)	5 (5)
7	92	12 (13)	46 (50)	30 (33)	4 (4)
8	114	20 (18)	60 (53)	31 (27)	3 (3)
9	108	17 (16)	62 (57)	24 (22)	5 (5)
10	89	10 (11)	61 (69)	15 (17)	3 (3)
Total	1109	158 (14)	620 (56)	279 (25)	52 (5)

Appendix B. Use of birth control by time point and site

Table B1. Use of contraception at 6 months (percentages based on those with data)

Site	N active	N with data	Yes N (%)	No N (%)	No sex N (%)	No data
1	87	59	51 (86)	7 (12)	1 (2)	28
2	94	87	75 (86)	6 (7)	6 (7)	7
3	128	110	102 (93)	4 (4)	4 (4)	18
4	108	92	72 (78)	13 (14)	7 (8)	16
5	97	74	62 (84)	1 (1)	11(14)	23
6	73	60	53 (88)	5 (8)	2 (3)	13
7	87	77	64 (83)	8 (10)	5 (3)	10
8	101	80	62 (77)	9 (11)	9 (11)	21
9	108	94	75 (80)	14 (15)	5 (4)	14
10	101	87	73 (84)	8 (9)	6 (6)	14
Total	984	820	689 (84)	75 (9)	56 (7)	164

Table B2. Frequency of use of contraception at 6 months (percentages are of those who reported using contraception and who gave frequency)

Site	N	Every time N (%)	Most of time N (%)	Half the time N (%)	Some of the time N(%)
1	49	39 (80)	4 (8)	0	6 (12)
2	74	51 (70)	18 (24)	1 (1)	4 (5)
3	99	81 (82)	9 (9)	2 (2)	7 (7)
4	71	54 (76)	8 (11)	5 (7)	4 (6)
5	62	44 (71)	13 (21)	1(2)	4 (7)
6	53	38 (72)	11 (21)	0	4 (8)
7	62	40(65)	15 (24)	2 (3)	5 (8)
8	57	45 (79)	8 (14)	0	4 (7)
9	75	47 (63)	18 (24)	0	10 (13)
10	69	51 (74)	9 (13)	2 (3)	7 (10)
Total	671	490 (73)	113 (17)	13 (2)	55 (8)

Table B3 Use of contraception at 12 months (percentages are of those with data)

Site	N active	N with data	Yes N (%)	No N (%)	No sex N (%)	No data
1	83	58	45 (78)	9 (16)	4 (7)	25
2	93	78	60 (77)	12 (15)	6 (8)	15
3	117	106	93 (88)	10 (9)	3 (3)	11
4	90	73	51 (70)	15 (21)	7 (10)	17
5	86	58	47(81)	6 (10)	5(9)	28
6	53	49	40 (82)	5 (10)	4 (8)	4
7	74	53	38 (72)	6 (11)	9 (17)	21
8	87	57	40 (70)	8 (14)	9(16)	30
9	93	79	58 (74)	14 (18)	7(9)	14
10	91	77	67 (87)	5 (6)	5 (6)	14
Total	867	688	539 (78)	90 (13)	59 (9)	179

Table B4. Frequency of use of contraception at 12 months (percentages are of those who reported using contraception and who gave frequency)

Site	N	Every time N (%)	Most of time N (%)	Half the time N (%)	Some of the time N(%)
1	44	29 (66)	5 (11)	1 (2)	9 (21)
2	60	42 (70)	14 (23)	0	4 (7)
3	92	74 (80)	9 (10)	0	9 (10)
4	48	36 (75)	7 (15)	0	5 (10)
5	46	34 (74)	8 (17)	1(2)	3 (7)
6	40	28 (70)	7 (18)	0	5 (13)
7	38	25 (66)	11 (29)	0	2 (5)
8	37	28 (76)	5 (14)	1 (3)	3 (8)
9	58	34 (59)	18 (31)	0	6 (10)
10	65	46 (71)	9 (14)	1 (2)	9 (14)
Total	528	376 (71)	93 (18)	4 (1)	55 (10)

Table B5 Use of contraception at 18 months (percentages are of those with data)

Site	N active	N with data	Yes N (%)	No N (%)	No sex N (%)	No data
1	77	34	22 (65)	9 (16)	3 (7)	43
2	89	65	56 (86)	5 (15)	4 (8)	24
3	109	103	90 (87)	9 (9)	4 (3)	6
4	85	67	44 (66)	14 (21)	9 (10)	18
5	85	35	24(69)	9 (10)	2 (9)	50
6	43	38	31(82)	3 (10)	4 (8)	5
7	68	37	21 (57)	12 (11)	4 (17)	31
8	84	39	28 (72)	7 (14)	4(16)	45
9	83	61	40 (66)	16 (18)	5(9)	22
10	89	65	47 (72)	13 (6)	5 (6)	24
Total	812	544	403 (74)	97 (18)	44 (8)	268

Table B6 Frequency of use of contraception at 18 months (percentages are of those who reported using contraception and who gave frequency)

Site	N	Every time N (%)	Most of time N (%)	Half the time N (%)	Some of the time N (%)
1	22	19 (86)	0	1 (5)	2 (9)
2	56	40 (71)	10 (18)	0	6 (11)
3	90	68 (76)	12 (13)	1 (1)	9 (10)
4	43	34 (79)	5 (12)	0	4 (9)
5	24	19 (79)	2 (8)	0	3 (13)
6	31	20 (65)	6 (19)	1 (3)	4 (13)
7	21	18 (86)	2 (10)	0	1 (5)
8	27	19 (70)	3 (11)	1 (4)	4 (15)
9	40	25 (63)	6 (15)	1 (2)	8 (20)
10	45	32 (71)	8 (18)	0	5 (11)
Total	399	294 (74)	54 (14)	5 (1)	46 (12)

Table B7 Use of contraception at 24 months

Site	N active	N with data	Yes N (%)	No N (%)	No sex N (%)	No data
1	69	24	15 (63)	9 (37)	0	43
2	87	53	43 (81)	8 (15)	2 (4)	24
3	105	93	80 (86)	7(8)	6 (6)	6
4	83	65	43 (66)	14 (22)	9 (14)	18
5	78	43	32 (74)	7 (16)	4 (9)	50
6	39	35	28 (80)	3 (9)	4 (11)	5
7	66	35	25 (71)	6 (17)	4 (11)	31
8	78	57	45 (79)	7 (12)	5 (9)	45
9	79	52	31 (60)	17(32)	4 (8)	22
10	85	41	41 (73)	7 (17)	3 (5)	24
Total	769	513	383 (75)	85 (17)	41 (8)	268

Table B8. Frequency of use of contraception at 24 months (percentages are of those who reported using contraception and who gave frequency)

Site	N	Every time N (%)	Most of time N (%)	Half the time N (%)	Some of the time N (%)
1	15	11 (73)	1 (7)	0	3 (20)
2	43	35 (81)	4 (9)	0	4 (9)
3	80	64 (80)	4 (5)	4 (5)	8 (10)
4	42	37 (88)	2 (5)	0	3 (7)
5	31	26 (84)	4 (13)	0	1 (3)
6	27	15 (56)	6 (22)	4 (15)	2 (7)
7	25	17 (68)	2 (8)	1 (4)	5 (20)
8	40	33 (83)	0	2 (5)	5 (13)
9	31	20 (65)	6 (19)	1 (3)	4 (13)
10	41	26 (63)	7 (17)	1 (2)	7 (17)
Total	375	284 (76)	36 (10)	13 (3)	42 (11)

Appendix C. Educational qualifications and NEET by site

Table C1. Change in any GCSE qualifications by site

Site	N	Intake Mean any	Final Mean any	T test	P value
1	107	4.1	4.6	2.31	.02
2	97	4.2	4.6	2.94	.004
3	168	4.8	5.2	3.30	.001
4	126	3.7	4.2	3.52	.001
5	107	4.3	4.7	2.64	.009
6	81	4.4	4.9	3.31	.001
7	97	3.8	4.4	3.25	.002
8	118	3.8	4.7	4.26	.000
9	124	4.5	4.9	3.34	.001
10	99	3.8	4.8	3.85	.000
Total	1124	4.2	4.7	10.33	.001

Table C2. Change in GCSE qualifications at A* to C grade by site

Site	N	Intake Mean A* to C	Final Mean A* to C	T test	P value
1	98	2.0	2.4	2.53	.01
2	96	1.9	2.2	3.02	.003
3	172	2.6	3.0	3.45	.001
4	127	1.9	2.2	2.15	.03
5	107	1.9	2.2	2.09	.04
6	81	1.7	1.9	2.08	.04
7	97	2.0	2.3	2.19	.03
8	119	2.6	3.2	3.28	.001
9	121	2.5	2.7	3.07	.003
10	99	1.9	2.3	3.38	.001
Total	1117	2.1	2.5	7.31	.001

Table C3 Clients who are not in education, employment or training (NEET) at each data collection time point by site (percentages in brackets)

Site	Intake		6 months		12 months		18 months		24 months	
	N	NEET	N	NEET	N	NEET	N	NEET	N	NEET
1	104	56 (54)	59	44 (75)	55	37 (67)	35	24 (69)	24	14 (58)
2	106	57 (54)	87	66 (76)	78	45 (58)	62	36 (58)	53	30 (57)
3	174	90 (52)	115	76 (66)	104	63 (61)	103	65 (63)	93	58 (62)
4	135	80 (59)	83	60 (72)	69	35 (51)	62	42 (68)	61	37 (61)
5	114	67 (59)	69	57 (83)	55	36 (66)	34	21 (62)	43	28 (65)
6	90	42 (47)	60	47 (78)	49	29 (59)	37	23 (62)	33	16 (49)
7	102	62 (61)	78	54 (69)	53	38 (72)	35	22 (63)	29	16 (55)
8	115	67 (58)	79	52 (66)	55	39 (71)	37	24 (65)	57	28 (49)
9	123	87 (71)	93	73 (78)	76	56 (74)	60	46 (75)	52	35 (67)
10	100	51 (51)	85	59 (69)	75	54 (72)	60	45 (75)	56	43 (77)
All	1163	659(57)	808	588(73)	669	432(65)	525	348(66)	501	305(61)

APPENDIX D. Ages and Stages Questionnaire mean scores by site

1. ASQ Communication

Table D1. ASQ Communication at 4 months by site

Site	N	Mean score	Range	Below cut-off 33 N (%)
1	52	54.9	35 - 60	0
2	89	56.1	40 - 60	0
3	113	53.3	25 - 60	3 (2.7)
4	86	54.1	10 - 60	2 (2.3)
5	65	51.2	30 - 60	1 (1.5)
6	59	51.1	20 - 60	1 (1.7)
7	73	51.6	20 - 60	3 (4.1)
8	50	55.0	40 - 60	0
9	95	53.6	15 - 60	2 (2.1)
10	77	52.6	30 - 60	3 (3.9)
Total	759	53.4	10 - 60	15 (2.0)

Table D2. ASQ Communication at 10 months by site

Site	N	Mean score	Range	Below cut-off 25 N (%)
1	46	53.6	30 - 60	0
2	73	57.2	45 - 60	0
3	96	50.7	25 - 60	0
4	79	53.2	15 - 60	1 (1.3)
5	57	48.3	5 - 60	3 (5.3)
6	45	47.7	25 - 60	0
7	46	51.5	10 - 60	2 (4.3)
8	43	54.2	35 - 60	0
9	70	51.1	0 - 60	1 (1.4)
10	67	51.0	5 - 60	2 (3.0)
Total	622	51.9	0 - 60	9 (1.4)

Table D3. ASQ Communication at 14 months by site

Site	N	Mean score	Range	Below cut-off 31 N (%)
1	27	51.5	25 - 60	2 (7.4)
2	53	56.7	35 - 60	0
3	101	50.4	20 - 60	11 (10.9)
4	62	53.2	30 - 60	2 (3.2)
5	33	51.5	0 - 60	1 (3.0)
6	34	50.0	25 - 60	2 (5.9)
7	30	49.2	20 - 60	4 (13.3)
8	40	51.4	25 - 60	3 (7.5)
9	55	49.4	20 - 60	1 (1.8)
10	54	53.8	25 - 60	1 (1.9)
Total	489	51.8	0 - 60	27 (5.5)

Table D4. ASQ Communication at 20 months by site

Site	N	Mean score	Range	Below cut-off 36 N (%)
1	21	54.0	35 - 60	1 (4.8)
2	55	52.9	20 - 60	2 (3.6)
3	94	51.4	15 - 60	15 (16.0)
4	59	52.8	10 - 60	5 (8.5)
5	45	50.1	0 - 60	3 (6.7)
6	32	50.9	0 - 60	3 (9.4)
7	25	46.8	10 - 60	7 (28.0)
8	47	48.7	5 - 60	9 (19.1)
9	40	47.0	10 - 60	9 (22.5)
10	51	51.1	10 - 60	10 (19.6)
Total	469	50.8	0 - 60	64 (13.6)

2. ASQ Problem Solving

Table D5. ASQ Problem Solving at 4 months by site

Site	N	Mean score	Range	Below cut-off 35 N (%)
1	52	55.9	30 - 60	1 (1.9)
2	89	58.2	40 - 60	0
3	113	52.7	25 - 60	4 (3.5)
4	86	54.5	20 - 60	1 (1.2)
5	65	52.0	25 - 60	2 (3.1)
6	59	52.4	20 - 60	3 (5.1)
7	73	57.5	25 – 60	1 (1.4)
8	50	54.8	30 - 60	1 (2.0)
9	95	56.1	30 - 60	1 (1.1)
10	77	55.4	25 - 60	2 (2.6)
Total	759	55.0	20 - 60	16 (2.1)

Table D6. ASQ Problem Solving at 10 months by site

Site	N	Mean score	Range	Below cut-off 31 N (%)
1	46	52.8	10 - 60	3 (6.5)
2	73	57.0	30 - 60	1 (1.4)
3	96	52.3	30 - 60	1 (1.0)
4	79	54.2	10 - 60	1 (1.3)
5	57	50.5	30 - 60	1 (1.8)
6	45	51.9	15 - 60	4 (8.9)
7	45	53.6	35 - 60	0
8	43	55.3	40 - 60	0
9	70	49.8	15 - 60	5 (7.1)
10	67	53.6	30 - 60	2 (3.0)
Total	621	53.1	10 - 60	18 (2.9)

Table D7. ASQ Problem Solving at 14 months by site

Site	N	Mean score	Range	Below cut-off 29 N (%)
1	27	52.6	25 - 60	1 (3.7)
2	53	56.7	30 - 60	0
3	101	50.5	20 - 60	2 (2.0)
4	62	49.9	25 - 60	1 (1.6)
5	33	46.5	25 - 60	1 (3.0)
6	34	49.9	10 - 60	1 (2.9)
7	30	49.3	20 - 60	2 (6.7)
8	40	49.3	25 - 60	2 (5.0)
9	55	47.2	30 - 60	0
10	53	50.7	30 - 60	0
Total	488	50.4	10 - 60	10 (2.0)

Table D8. ASQ Problem Solving at 20 months by site

Site	N	Mean score	Range	Below cut-off 30 N (%)
1	21	51.2	40 - 60	0
2	55	53.0	30 - 60	0
3	94	50.7	20 - 60	1 (1.1)
4	59	50.6	0 - 60	1 (1.7)
5	45	50.9	30 - 60	0
6	32	51.1	10 - 60	1 (3.1)
7	25	49.2	35 - 60	0
8	47	45.5	5 - 60	1 (2.1)
9	39	50.5	35 - 60	0
10	51	49.5	30 - 60	0
Total	468	50.3	0 - 60	4 (0.9)

3. ASQ Gross Motor Development

Table D9. ASQ Gross Motor at 4 months by site

Site	N	Mean score	Range	Below cut-off 40 N (%)
1	52	55.2	25 - 60	2 (3.8)
2	89	56.2	30 - 60	3 (3.4)
3	113	51.2	15 - 60	19 (16.8)
4	86	52.4	20 - 60	14 (16.3)
5	65	52.5	5 - 60	7 (10.8)
6	59	53.1	25 - 60	5 (8.5)
7	73	56.8	20 - 60	3 (4.1)
8	50	56.4	40 - 60	0
9	95	53.3	15 - 60	12 (12.6)
10	77	53.8	25 - 60	10 (13.0)
Total	759	53.9	5 - 60	75 (10)

Table D10. ASQ Gross Motor at 10 months by site

Site	N	Mean score	Range	Below cut-off 18 N (%)
1	46	42.7	10 - 60	3 (6.5)
2	73	48.6	20 - 60	0
3	96	47.7	10 - 60	2 (2.1)
4	79	49.4	10 - 60	2 (2.5)
5	57	52.5	20 - 60	0
6	45	47.2	10 - 60	1 (2.2)
7	45	48.6	15 - 60	1 (2.2)
8	43	54.4	20 - 60	0
9	70	50.4	0 - 60	4 (5.7)
10	67	48.4	0 - 60	1 (1.5)
Total	621	49.0	0 - 60	14 (2.3)

Table D11. ASQ Gross Motor at 14 months by site

Site	N	Mean score	Range	Below cut-off 24 N (%)
1	27	53.1	0 - 60	2 (7.4)
2	53	54.5	20 - 60	1 (1.9)
3	101	53.2	5 - 60	4 (4.0)
4	62	55.3	25 - 60	0
5	33	56.8	35 - 60	0
6	34	51.3	15 - 60	3 (8.8)
7	30	52.3	15 - 60	2 (6.7)
8	40	58.0	30 - 60	0
9	55	53.4	15 - 60	2 (3.6)
10	54	52.4	10 - 60	4 (7.4)
Total	489	54.0	0 - 60	18 (3.7)

Table D12. ASQ Gross Motor at 20 months by site

Site	N	Mean score	Range	Below cut-off 36 N (%)
1	21	56.0	5 - 60	1 (4.8)
2	55	55.2	20 - 60	1 (1.8)
3	94	54.7	15 - 60	5 (5.3)
4	59	54.0	0 - 60	5 (8.5)
5	45	58.1	40 - 60	0
6	32	56.9	20 - 60	1 (3.1)
7	25	55.4	40 - 60	0
8	47	56.1	5 - 60	1 (4.3)
9	39	56.0	40 - 60	0
10	51	56.0	20 - 60	2 (3.9)
Total	468	55.6	0 - 60	17 (3.6)

4. ASQ Fine Motor Development

Table D13. ASQ Fine Motor at 4 months by site

Site	N	Mean score	Range	Below cut-off 28 N (%)
1	52	54.2	25 - 60	1 (1.9)
2	89	56.7	35 - 60	0
3	113	50.8	25 - 60	3 (2.7)
4	86	52.9	10 - 60	1 (1.2)
5	65	49.4	20 - 60	2 (3.1)
6	59	51.7	30 - 60	0
7	73	53.8	25 - 60	1 (1.4)
8	50	53.8	30 - 60	0
9	95	53.7	5 - 60	1 (1.1)
10	77	48.6	15 - 60	5 (6.5)
Total	759	52.6	5 - 60	14 (1.8)

Table D14. ASQ Fine Motor at 10 months by site

Site	N	Mean score	Range	Below cut-off 39 N (%)
1	46	54.2	10 - 60	3 (6.5)
2	73	58.3	40 - 60	0
3	96	53.1	25 - 60	3 (3.1)
4	79	55.0	10 - 60	1 (1.3)
5	57	53.8	35 - 60	1 (1.8)
6	45	53.2	30 - 60	3 (6.7)
7	45	56.6	35 - 60	2 (4.4)
8	43	55.7	35 - 60	1 (2.3)
9	70	53.1	30 - 60	3 (4.3)
10	67	55.1	30 - 60	1 (1.5)
Total	621	54.8	10 - 60	18 (2.9)

Table D15. ASQ Fine Motor at 14 months by site

Site	N	Mean score	Range	Below cut-off 25 N (%)
1	27	54.8	25 - 60	0
2	53	54.9	30 - 60	0
3	101	53.9	15 - 60	1 (1.0)
4	62	50.6	25 - 60	0
5	33	50.3	30 - 60	0
6	34	51.5	25 - 60	0
7	30	50.2	20 - 60	1 (3.3)
8	40	50.9	20 - 60	1 (2.5)
9	55	50.0	25 - 60	0
10	53	51.5	20 - 60	1 (1.9)
Total	488	52.0	15 - 60	4 (0.8)

Table D16. ASQ Fine Motor at 20 months by site

Site	N	Mean score	Range	Below cut-off 40 N (%)
1	21	59.0	50 - 60	0
2	55	56.6	45 - 60	0
3	94	53.4	30 - 60	3 (3.2)
4	59	52.8	0 - 60	3 (5.1)
5	45	54.6	45 - 60	0
6	32	54.5	40 - 60	0
7	25	50.4	30 - 60	2 (8.0)
8	47	51.2	10 - 60	1 (2.1)
9	39	54.4	40 - 60	0
10	51	55.9	35 - 60	1 (2.0)
Total	468	54.1	0 - 60	10 (2.1)

5. ASQ Personal-Social Development

Table D17. ASQ Personal-social at 4 months by site

Site	N	Mean score	Range	Below cut-off 33 N (%)
1	52	55.9	35 - 60	0
2	89	57.6	45 - 60	0
3	113	52.1	20 - 60	4 (3.5)
4	86	54.9	30 - 60	1 (1.2)
5	65	51.5	20 - 60	2 (3.1)
6	59	51.5	30 - 60	1 (1.7)
7	73	53.4	35 - 60	0
8	50	53.8	35 - 60	0
9	95	53.7	25 - 60	3 (3.2)
10	77	50.7	5 - 60	3 (3.9)
Total	759	53.5	5 - 60	14 (1.8)

Table D18. ASQ Personal-social at 10 months by site

Site	N	Mean score	Range	Below cut-off 30 N (%)
1	46	50.8	5 - 60	1 (2.2)
2	73	53.9	20 - 60	1 (1.4)
3	96	49.7	30 - 60	0
4	79	51.4	15 - 60	2 (2.5)
5	57	49.6	30 - 60	0
6	45	47.8	20 - 60	1 (2.2)
7	45	51.0	35 - 60	0
8	43	50.1	30 - 60	0
9	70	50.4	5 - 60	1 (1.4)
10	67	50.0	25 - 60	1 (1.5)
Total	621	50.6	5 - 60	7 (1.1)

Table D19. ASQ Personal-social at 14 months by site

Site	N	Mean score	Range	Below cut-off 23 N (%)
1	27	55.9	20 – 60	1 (3.7)
2	53	57.4	40 – 60	0
3	101	54.8	35 – 60	0
4	62	55.4	30 – 60	0
5	33	52.6	0 – 60	1 (3.0)
6	34	55.9	35 – 60	0
7	29	55.3	40 – 60	0
8	40	52.5	30 – 60	0
9	55	51.5	35 – 60	0
10	53	56.5	40 – 60	0
Total	487	54.8	0 – 60	2 (0.4)

Table D20. ASQ Personal-social at 20 months by site

Site	N	Mean score	Range	Below cut-off 35 N (%)
1	21	59.0	55 – 60	0
2	55	58.2	45 – 60	0
3	94	54.3	30 – 60	4 (4.3)
4	59	55.4	5 – 60	2 (3.4)
5	45	54.8	35 – 60	1 (2.2)
6	32	55.2	40 – 60	0
7	25	53.0	30 – 60	2 (8.0)
8	47	52.1	10 – 60	4 (8.5)
9	39	53.7	40 – 60	0
10	51	56.0	40 – 60	0
Total	468	55.1	5 – 60	13 (2.8)

6. ASQ-SE Socio-emotional and behavioural problems

Table D21. ASQ-SE at 6 months by site

Site	N	Mean score	Range	Above cut-off 45 N (%)
1	35	12.7	0 – 40	0
2	83	7.6	0 – 40	0
3	88	15.8	0 – 50	1 (1.1)
4	73	15.6	0 – 60	1 (1.4)
5	57	17.5	0 – 88	2 (3.5)
6	58	13.3	0 – 50	1 (1.7)
7	68	18.8	0 – 90	6 (8.8)
8	63	6.4	0 – 25	0
9	91	17.4	0 – 70	1 (1.1)
10	74	13.8	0 – 45	0
Total	690	14.0	0 – 90	12 (1.8)

Table D22. ASQ-SE at 12 months by site

Site	N	Mean score	Range	Above cut-off 48 N (%)
1	33	13.3	0 – 75	1 (3.0)
2	73	7.7	0 – 45	0
3	86	19.6	0 – 75	3 (3.5)
4	75	15.8	0 – 45	0
5	54	21.1	0 – 75	2 (3.7)
6	45	15.3	0 – 55	1 (2.2)
7	49	23.8	0 – 75	6 (12.2)
8	59	13.4	0 – 50	1 (1.7)
9	75	20.5	0 – 65	1 (1.3)
10	67	15.3	0 – 60	2 (3.0)
Total	616	16.6	0 – 75	17 (2.8)

Table D23. ASQ-SE at 18 months by site

Site	N	Mean score	Range	Above cut-off 50 N (%)
1	25	6.4	0 – 45	0
2	60	10.7	0 – 85	1 (1.7)
3	95	19.8	0 – 65	6 (6.3)
4	62	17.4	0 – 65	4 (6.5)
5	35	22.6	0 – 55	1 (2.9)
6	34	14.1	0 – 50	0
7	33	22.0	0 – 60	2 (6.1)
8	58	14.6	0 – 40	0
9	59	22.6	0 – 50	0
10	57	16.1	0 – 50	0
Total	518	17.1	0 – 85	14 (2.7)

Table D24. ASQ-SE at 24 months by site

Site	N	Mean score	Range	Above cut-off 50 N (%)
1	22	6.6	0 – 30	0
2	55	10.9	0 – 70	2 (3.6)
3	93	16.1	0 – 85	1 (1.1)
4	59	20.0	0 – 95	3 (5.1)
5	46	17.3	0 – 45	0
6	33	10.2	0 – 35	0
7	37	17.6	0 – 60	1 (2.7)
8	58	19.5	0 – 85	2 (3.4)
9	45	18.0	0 – 45	0
10	51	13.0	0 – 40	0
Total	499	15.6	0 – 95	9 (2.0)

Appendix E. Comparisons of Wave 1 and Wave 2a.

Table E1. Delivery of FNP in pregnancy for clients whose pregnancy is complete, including pregnancy leavers (* mean wave score significantly higher)

Site	N	Mean visits	range	Mean visits expected	% of expected received	range	80%+
1	118	7.8	1-18	12.1	63.5	9- 113	27 (23%)
2	111	8.1	1-17	11.7	69.6	15 – 140	32 (29%)
3	190	9.0	1-16	12.1	73.2	14-200	83 (44)
4	153	6.4	0-15	10.7	60.1	0 - 150	34 (22%)
5	123	8.4	1-18	11.1	75.1	20 - 130	50 (41%)
6	100	7.3	1-15	11.9	61.5	14 - 100	20 (20%)
7	112	7.2	1-16	11.5	62.4	9 - 143	28 (25%)
8	133	6.1	0-16	9.9	61.3	0 - 125	37 (28%)
9	139	6.5	0-12	9.7	68.7	0 - 200	51 (37%)
10	124	6.2	1-14	10.9	56.5	8 - 125	25 (20%)
Total	**1303**	**7.3**	**0-18**	**11.1**	**65.6**	**0 - 200**	**387 (30%)**
11	103	9.7	1-16	12.7	75.8	8-123	56 (54%)
12	104	8.2	1-21	11.9	69.6	7-162	31 (30%)
13	101	7.6	1-17	11.8	64.2	7-155	26 (26%)
14	95	6.8	1-14	10.6	65.4	7-157	28 (30%)
15	103	8.1	1-15	11.7	71.2	7-167	38 (37%)
16	175	8.3	0-15	12.8	66.7	0-150	56 (32%)
17	86	6.7	1-16	11.5	58.3	7-145	18 (21%)
18	105	8.2	0-15	12.0	68.6	0-143	26 (25%)
19	111	9.7	1-18	12.5	78.9	7-143	61 (55%)
20	89	8.7	1-15	12.2	71.8	7-117	38 (43%)
Total	**1072**	**8.2***	**0-21**	**12.1***	**69.1***	**0-167**	**378 (35%)***

Comparing the Wave totals, Wave 2a sites delivered on average more of the programme in pregnancy than Wave 1 sites:

- More visits completed per client on average (8.2 vs. 7.3, t=6.35, p<0.001);
- More visits expected per client on average (12.1 vs. 11.1, t=6.91, p<0.001), an indication of less attrition;
- A greater percentage of expected visits delivered on average (69.1 vs. 65.6, t=3.34, p<0.001); and
- A greater proportion of clients receiving 80% or more of their expected visits (35% vs. 30%, Chi Square = 8.3, df 1, p<0.01).

Table E2. Characteristics of pregnancy visits by site in Wave 1 and Wave 2a (* mean wave score significantly higher)

Site	Mean Visit length	Personal Health %	Maternal Role %	Life Course %	Family And Friends %	Environ mental health	% of plan
Objective	**(60+)**	**35-40**	**23-25**	**10-15**	**10-15**	**5-7**	**-**
1 118	62.3	38.6	23.2	10.1	16.7	11.3	96.4
2 111	74.9	29.8	27.5	12.1	17.8	12.7	94.8
3 190	65.4	32.4	23.1	13.3	16.2	15.0	97.9
4 152	77.5	36.5	24.1	11.0	14.7	13.7	92.0
5 123	73.9	39.5	25.9	10.8	13.5	10.3	95.2
6 100	78.5	35.4	23.5	10.0	17.5	13.6	85.9
7 112	79.5	35.5	21.0	11.1	17.7	14.7	93.3
8 130	74.6	29.9	27.5	12.9	15.4	14.3	95.3
9 138	77.0	35.7	24.6	10.3	16.7	12.6	92.9
10 124	81.1	40.7	22.8	9.4	15.3	11.7	94.8
N = 1298	**74.0**	**35.3**	**24.3**	**11.2**	**16.1***	**13.1***	**94.1**
11 103	89.3	31.7	26.5	12.9	14.9	14.0	95.3
12 104	82.2	37.0	25.0	11.2	14.2	12.6	94.0
13 101	70.5	30.5	27.3	12.4	15.7	14.2	91.9
14 95	86.0	37.6	25.5	9.7	17.0	10.2	86.0
15 103	88.6	36.7	25.7	11.6	15.1	10.8	92.3
16 174	76.6	34.1	25.6	13.3	15.2	11.7	94.3
17 86	75.2	34.8	26.5	14.2	14.3	10.2	96.9
18 104	80.7	38.8	23.1	11.7	16.5	9.9	90.0
19 111	83.0	38.5	27.0	12.6	13.8	8.1	97.0
20 89	86.1	40.6	25.7	10.8	12.5	10.5	94.9
N = 1070	**81.5***	**35.9**	**25.8***	**12.1***	**15.0**	**11.3**	**93.3**

The manner of delivery in pregnancy differed between Waves 1 and 2 in the following ways:

- The mean visit length was longer in Wave 2a sites (81.5 vs. 74.0 minutes), t = 13.26, p<0.001;
- More time was spent on average in Wave 2a sites on the maternal role (25.8% vs. 24.3%) and life course (12.1% vs. 11.2%), t = 5.58 and t = 4.97, both p<0.001; and
- More time was spent on average in Wave 1 sites on Family and friends (16.1% vs. 15.0%) and environmental health (13.1% vs. 11.3%), t = 5.32 and t = 8.44, both p<0.001.

Table E3. Ratings of clients and partners during all pregnancy visits for Wave 1 and Wave 2a sites (scale: 1 low to 5 high; * wave mean significantly higher)

Site	N	Client involve-ment	Client under-standing	Client conflict	N	Partner involve-ment	Partner under-standing	Partner conflict
1	118	4.6	4.2	1.3	72	3.9	3.6	1.4
2	111	4.9	4.8	1.1	69	4.3	4.4	1.1
3	190	4.7	4.4	1.4	105	4.0	3.8	1.3
4	152	4.7	4.5	1.1	74	3.6	4.1	1.1
5	123	4.8	4.6	1.1	62	3.9	4.3	1.1
6	100	4.7	4.5	1.2	63	3.9	4.2	1.2
7	112	4.5	4.4	1.1	63	3.9	4.1	1.2
8	130	4.4	4.3	1.3	39	3.7	3.9	1.2
9	138	4.6	4.4	1.1	51	3.9	4.1	1.1
10	124	4.8	4.6	1.0	62	3.5	4.4	1.0
	1298	**4.7***	**4.5**	**1.18**	**660**	**3.9**	**4.1**	**1.2**
11	103	4.6	4.3	1.2	72	4.0	3.9	1.3
12	104	4.2	3.8	1.5	58	3.6	3.6	1.8
13	101	4.3	4.0	1.4	59	3.9	3.9	1.5
14	95	4.8	4.7	1.1	33	3.9	4.3	1.3
15	103	4.7	4.5	1.2	54	4.0	4.3	1.4
16	174	4.6	4.6	1.2	107	4.0	4.4	1.3
17	86	4.8	4.7	1.1	51	4.4	4.5	1.2
18	104	4.8	4.6	1.2	68	4.1	4.4	1.3
19	111	4.7	4.7	1.0	64	4.0	4.6	1.0
20	89	4.7	4.6	1.1	62	3.7	3.9	1.1
	1070	**4.6**	**4.4**	**1.23***	**628**	**3.9**	**4.2**	**1.3***

There were some small differences on average in the ratings made by FNs about Wave 1 and Wave 2a clients.

- Wave 1 clients were rated on average as more involved (4.7 vs. 4.6, $t = 2.88$, $p < 0.01$);
- Wave 2a clients and their partners were rated as showing more conflict with the materials (clients 1.23 vs. 1.18 ; partners 1.3 vs. 1.2), $t = 2.61$ and $t = 3.30$, both $p < 0.01$).

Table E4. Infancy visits delivered for clients with infancy complete, (infant at least 12 months old) including pregnancy and infancy leavers in Wave 1 and Wave 2a

Site/ Wave	N	Mean visits	range	Mean visits expected	% of expected	range	65%+ N(%)
1	118	12.6	0-33	21.8	55.9	17-114	33 (34)
2	111	16.3	0-32	24.8	62.9	0-110	52 (52)
3	190	13.1	0-32	20.1	62.4	0-133	79 (53)
4	153	10.5	0-26	20.7	47.4	0-100	31 (24)
5	123	14.0	0-31	22.8	59.0	0-107	51 (47)
6	100	12.4	0-29	20.5	57.5	0-100	33 (39)
7	112	13.6	0-33	22.6	58.3	0-142	37 (38)
8	133	11.4	0-30	22.7	48.1	0-167	28 (23)
9	139	12.0	0-35	23.3	48.9	0-121	32 (25)
10	124	12.8	0-31	23.2	52.0	0-107	31 (28)
Wave 1	**1303**	**12.8**	**0-35**	**22.1**	**55.0**	**0-167**	**407[14](36)**
11	46	18.1	0-27	28.4	63.7	0-93	27 (59)
12	54	15.9	0-25	28.2	55.5	0-86	22 (41)
13	39	12.7	0-26	25.6	46.6	0-89	11 (29)
14	43	9.8	0-20	25.1	36.9	0-84	5 (12)
15	56	17.0	0-34	28.6	59.0	0-117	24 (43)
16	81	15.8	0-37	26.3	58.0	0-128	30 (39)
17	54	14.1	0-31	26.0	51.4	0-107	17 (33)
18	55	19.3	0-35	27.0	69.5	0-150	35 (65)
19	57	19.1	0-39	25.2	70.5	0-135	39 (71)
20	10	17.2	0-25	28.3	60.8	0-89	4 (40)
Wave 2a	**495**	**16.0***	**0-39**	**26.8***	**57.7***	**0-150**	**214[15] (44)**

Comparing the Wave totals, Wave 2a delivered on average more of the programme in infancy than Wave 1 sites:

- More visits completed per client on average (12.8 vs. 16.0, t=7.34, p<0.001);
- More visits expected per client (22.1 vs. 26.8, t=8.76, p<0.001)
- A greater percentage of expected visits delivered on average (55.0 vs. 57.7, t=2.03, p<0.05); and
- A greater proportion of clients receiving 80% or more of their expected visits (44% vs. 36%, Chi Square = 8.99, df 1, p<0.01).

Note that the mean numbers of visits expected and delivered in infancy are influenced by attrition rates in pregnancy. Attrition in Wave 1 was substantially higher than that in Wave 2a in pregnancy 14% vs. 2%) so fewer clients expected no infancy visits and received no visits.

[14] The proportion of expected visits received is only available for 1122 clients Wave 1 clients with infants. The remaining 181 are179 pregnancy leavers and 2 infancy leavers who left within one week of the infant's birth, for whom expected visits = 0 and completed visits = 0.
[15] The proportion of expected visits received is only available for 484 Wave 2a clients, the remaining 11 having left or become inactive during pregnancy, for whom expected visits = 0 and completed visits = 0.

Table E5. The nature of infancy visits conducted with Wave 1 and Wave 2a clients who have completed infancy

Site/ Wave	Mean visit length	Personal health	Maternal role	Life course	Family and friends	Environ mental health	% of plan
Target	**(mins)**	**14-20%**	**45-50%**	**10-15%**	**10-15%**	**7-10%**	
1	61.5	20.3	44.6	11.1	13.8	10.2	93.6
2	75.3	20.8	41.6	10.7	15.0	11.9	96.2
3	70.3	18.9	47.1	10.0	12.6	11.4	96.9
4	77.0	23.7	40.6	10.5	12.5	12.7	95.4
5	73.1	21.1	46.6	11.1	11.7	9.5	94.2
6	75.4	21.4	46.7	8.8	13.2	10.0	87.0
7	80.7	20.5	34.2	12.8	17.1	15.5	92.8
8	75.1	23.8	37.9	11.9	14.0	12.4	92.6
9	77.9	24.4	42.1	9.7	13.7	10.1	88.0
10	77.2	23.9	39.6	11.1	13.1	12.3	88.2
Wave 1	**74.3**	**21.9**	**42.1***	**10.8**	**13.6***	**11.6**	**92.7***
11	79.6	23.4	36.0	13.4	13.5	13.7	93.4
12	79.4	23.4	38.6	12.1	13.0	12.8	92.8
13	67.3	20.7	43.1	11.0	13.5	11.7	89.1
14	80.7	26.6	39.1	9.2	13.9	11.2	85.6
15	82.0	21.7	42.3	11.2	13.1	11.7	88.1
16	76.8	20.9	41.4	13.1	12.4	12.3	93.4
17	72.8	21.2	40.7	16.5	10.7	10.8	94.2
18	77.0	20.0	41.7	10.8	15.1	12.5	89.6
19	77.9	25.3	42.8	11.6	10.7	9.5	96.2
20	79.2	24.6	43.2	11.2	10.7	10.2	94.0
Wave 2a	**77.4***	**22.5**	**40.7**	**12.2***	**12.8**	**11.8**	**91.7**

The manner of delivery in infancy differed between Waves 1 and 2 in the following ways:

- The mean visit length was longer in Wave 2a sites (77.4 vs. 74.3 minutes), $t = 4.60$, $p<0.001$;
- More time was spent in Wave 2a sites on life course (12.2% vs. 10.8%, $t = 6.96$, $p<0.001$);
- More time was spent in Wave 1 sites on the maternal role (42.1% vs. 40.7%, $t = 3.29$, $p<.01$) and family and friends (13.6% vs. 12.8%, $t = 3.73$, $p<0.001$).

Table E6. Ratings of clients and partners during all infancy visits for Wave 1 and Wave 2a (scale 1 low to 5 high)

Site/ Wave	N	Client involve-ment	Client under-standing	Client conflict	N	Partner involve-ment	Partner under-standing	Partner conflict
1	96	4.6	4.2	1.2	76	3.7	3.6	1.2
2	98	4.9	4.9	1.0	79	4.3	4.6	1.0
3	142	4.6	4.4	1.4	96	3.7	3.9	1.3
4	120	4.7	4.6	1.1	85	3.7	3.9	1.1
5	103	4.8	4.6	1.0	69	4.0	4.4	1.1
6	80	4.5	4.4	1.4	67	3.7	4.1	1.4
7	94	4.5	4.5	1.2	59	3.8	4.3	1.3
8	118	4.3	4.3	1.2	57	3.4	3.6	1.1
9	123	4.5	4.4	1.1	74	3.7	3.8	1.1
10	104	4.7	4.6	1.1	78	3.5	4.4	1.1
1	**1078**	**4.6**	**4.5**	**1.16**	**740**	**3.8**	**4.1**	**1.2**
11	44	4.5	4.4	1.4	38	3.7	3.9	1.4
12	50	4.1	3.9	1.5	38	3.4	3.4	1.6
13	32	4.3	3.9	1.5	26	3.6	3.8	1.8
14	36	4.7	4.7	1.1	18	4.0	4.5	1.2
15	55	4.5	4.3	1.4	34	3.6	3.8	1.6
16	69	4.7	4.7	1.1	56	3.8	4.4	1.1
17	47	4.7	4.6	1.3	28	3.7	4.1	1.2
18	51	4.8	4.7	1.1	39	4.0	4.5	1.2
19	50	4.8	4.8	1.0	37	4.1	4.7	1.0
20	9	4.9	4.8	1.1	9	3.8	4.0	1.0
2	**443**	**4.6**	**4.5**	**1.24***	**323**	**3.8**	**4.1**	**1.3***

There were some small differences on average in the ratings made by FNs about Wave 1 and Wave 2a clients during infancy visits;

- Wave 2a clients and their partners were rated as showing more conflict with the materials (Clients 1.24 vs. 1.16; partners 1.3 vs. 1.2), $t = 3.47$ and $t = 3.98$, both $p<0.001$.

Table E7. Summary of location of visits in Wave 2a by site and phase

Site N	Phase	Client's Home	Family, friend	Children's Centre	Doctor, Clinic	Comm-unity	School, college	Other
11 2808	Pregnancy	89	5.5	3.7	0	0.6	0	1.2
	Infancy	92	2.9	1.7	0.2	0.5	0.3	2.6
	Toddler	85	5.0	0.8	1.7	1.7	0	5.9
	TOTAL	91	3.9	2.4	0.2	0.6	0.2	2.2
12 2606	Pregnancy	71	23	1.1	0.3	0.6	0.7	2.5
	Infancy	78	15	1.1	0.6	1.8	0.1	3.8
	Toddler	71	13	2.7	2.7	2.7	0	8.1
	TOTAL	75	18	1.2	0.6	1.4	0.3	3.5
13 1930	Pregnancy	79	6.3	4.7	1.2	2.8	0.8	5.6
	Infancy	86	6.9	1.0	0.4	0.8	0	4.9
	Toddler	69	14.3	8.6	0	8.6	0	0
	TOTAL	83	6.8	2.6	0.7	1.8	0.3	5.1
14 1551	Pregnancy	71	4.4	10.7	4.1	5.1	0.6	4.2
	Infancy	75	8.2	3.9	1.8	5.4	0.1	5.7
	Toddler	73	6.1	4.5	1.5	4.5	1.5	9.1
	TOTAL	73	6.4	6.8	2.8	5.2	0.4	5.2
15 2607	Pregnancy	90	6.6	0.7	0.1	1.7	0.3	0.9
	Infancy	88	7.9	0.2	0.2	1.0	0.1	3.0
	Toddler	86	7.6	1.0	0	0	1.0	4.8
	TOTAL	88	7.4	0.4	0.2	1.2	0.2	2.4
16 3974	Pregnancy	82	8.3	4.6	0.8	0.5	0.5	3.4
	Infancy	81	10.5	3.0	0.6	0.8	0	4.4
	Toddler	83	7.3	4.0	1.3	1.3	0	3.3
	TOTAL	81	9.6	3.6	0.7	0.7	0.2	4.0
17 1828	Pregnancy	92	1.7	0.6	0.3	1.3	0	4.4
	Infancy	89	2.4	0.5	0	1.5	1.3	5.2
	Toddler	91	3.6	0	0	3.6	1.2	1.2
	TOTAL	90	2.2	0.5	0.1	1.5	0.8	4.8
18 2937	Pregnancy	85	6.7	1.7	0.5	4.7	0.1	1.4
	Infancy	76	9.0	6.1	0.9	3.9	0	4.5
	Toddler	74	10.3	5.7	0.5	5.2	0.5	3.6
	TOTAL	78	8.4	4.8	0.7	4.2	0.1	3.5
19 3252	Pregnancy	92	5.3	0.1	0.2	2.1	0.3	0.5
	Infancy	91	5.0	0.3	0.1	0.7	0.5	2.8
	Toddler	92	2.9	0	0	0.7	0	4.3
	TOTAL	91	5.0	0.2	0.1	1.2	0.4	2.1
20 1668	Pregnancy	83	7.7	4.6	0.9	1.8	0.4	1.9
	Infancy	83	7.0	4.6	0.2	1.1	0.1	3.4
	Toddler[16]	-	-	-	-	-	-	-
	TOTAL	83	7.3	4.6	0.5	1.4	0.2	2.7

[16] Site 20 started recruiting clients later than other Wave 2a sites and only one toddler visit was recorded when the data were extracted, in mid July 2010, for a Wave 1 client who transferred sites.