

FNP Core Briefing – September 2010

Background

- It is estimated that between 2 and 5% of children in UK experience multiple deprivation and poor outcomes, incurring high cost to the public purse and society.
- Recent neuro-scientific evidence shows how for these children negative experiences and poor parenting in pregnancy and very early childhood can do lasting harm to a child's brain development, behaviour, learning and long term health. There is, therefore, a strong case for intervening early with powerful programmes known to make a difference for these vulnerable children.
- FNP is a preventive programme for vulnerable young first time mothers. It offers intensive and structured home visiting, delivered by specially trained nurses, from early pregnancy until the child is two. FNP has three aims: to improve pregnancy outcomes, child health and development and parents' economic self-sufficiency. The methods are based on theories of human ecology, self-efficacy and attachment, with much of the work focused on building strong relationships between the client and family nurse to facilitate behaviour change and tackle the emotional problems that prevent some mothers and fathers caring well for their child..
- FNP has brought a different way of working with the neediest families. It is strength based and focuses on an expectant mother's intrinsic motivation to do the best for their child. It consists of structured home visits using materials and activities that build self-efficacy, change health behaviour, improve care giving and increase economic self-sufficiency. At the heart of the model is the relationship between the client and the nurse. A therapeutic alliance is built by specially trained nurses, which enables the most at risk families to make changes to their health behaviour and emotional development and form a positive relationship with their baby.
- FNP is a licensed programme, developed in the US at the University of Colorado, where it is known as the Nurse Family Partnership (NFP). Over 30 years of rigorous research has shown significant benefits for vulnerable young families in the short, medium and long term across a wide range of outcomes including:
 - improved early language development, school readiness and academic achievement
 - improvements in antenatal health
 - reductions in children's injuries, neglect and abuse
 - improved parenting practices and behaviour
 - fewer subsequent pregnancies and greater intervals between births
 - increased maternal employment and reduced welfare use
 - increases in fathers' involvement
 - reduced arrests and criminal behaviour for both children and mothers.
- In an international review by The Lancet in 2009 the FNP was named as one of only two programmes shown to prevent child maltreatment.

- Cost savings in the US are substantial, ranging from \$17,000 to \$34,000 per child by the time they reach 15, with a \$3-5 return for every \$1 invested. Significant expansion is planned in the US, on the back of the Obama Health Bill.

FNP in England and Scotland

- FNP has been tested in England since April 2007. There are now teams in 49 LA/ PCT areas, with a further seven preparing to start delivery this year. Over 5,000 families have so far received FNP in England with over 7,000 expected to benefit by April 2011. It is estimated that the average local cost of FNP per client is £3,000 year.
- FNP is now being tested in Scotland for the first time in NHS Lothian City of Edinburgh Community Health Partnership (Edinburgh CHP) The testing of FNP for the three years that the programme takes to deliver is fully funded by Scottish Government ; 1.6M
- FNP is targeted on teenage first time mothers as a large body of research shows this group have a high level of need and that their children are at high risk of poor outcomes in the future. US evidence also shows that it is young disadvantaged first time mothers who benefit most from the programme. 85% of FNP mothers have incomes below the poverty line, 43% very low incomes and 75% no/minimal qualifications.
- FNP is being evaluated in England through a formative evaluation of the first ten sites, which will report early in 2011; and an RCT in 18 sites which will report in 2013.
- The testing of FNP in NHS Lothian will be evaluated by an externally commissioned evaluation team in 2013, the focus being on the transferability of this model recognising that the findings from RCT in England will also have a significant impact for FNP development in Scotland.
- Early learning and early impacts look promising:
 - high levels of engagement with hard to reach young parents, including fathers – 87% of those offered the programme enrolled;
 - strong engagement with fathers. More than half the fathers and partners had been present for at least one FNP visit;
 - enthusiastic support from nurses, who are seeing changes take place in health behaviour, relationships, parental role and maternal well-being. They have also reported that their clients are more confident as parents, were playing with their children more, wanted to learn, and had aspirations for the future.
 - reduced smoking during pregnancy and increased rates of breastfeeding.
- FNP in England is either connected to or delivered from Sure Start Children's Centres in many areas and Family Nurses encourage clients to use CC services, particularly in preparation for the end of the programme when children reach two. Family Nurses also work closely with health visitors and midwives and professionals from other services for children, young people and families where additional needs are identified, particularly in relation to social care and safeguarding.

3. FNP Evidence

A strong and rigorous US evidence base developed over 30 years has shown FNP benefits the most needy young families in the short, medium and long term across a wide range of outcomes helping improve social mobility and break the cycle of inter-generational disadvantage and poverty.

Evidence from three large scale trials which have followed children and families up to age 19 points to significantly improved health and well being for disadvantaged children and their families including:

- improved early language development, school readiness and academic achievement
 - improvements in antenatal health
 - reductions in children's injuries, neglect and abuse
 - improved parenting practices and behaviour
 - fewer subsequent pregnancies and greater intervals between births
 - increased maternal employment and reduced welfare use
 - increases in fathers' involvement
 - reduced arrests and criminal behaviour for children (at 15) and mothers.
- The benefits are greatest where the mother is young (teenage), has low psychological resources (low IQ, poor mental health, low SES/living in poverty) which is consistent with the eligibility criteria used to target the programme on first time teenage mothers in England.
 - Cost savings from FNP are substantial with savings of between \$17,000 and \$34,000 per child by the time they reach 15, \$3-\$5 for every \$1 invested, for high risk groups.
 - In an international review by The Lancet in 2009 FNP was named as one of only two programmes shown to prevent child maltreatment.
 - FNP is consistently rated by high quality evidence reviews as one of the most effective preventative programmes for vulnerable young families.
 - Recently published US evidence provides further evidence of FNP effects enduring through childhood and into adulthood. This showed that FNP improves school achievement, reduces the use of cigarettes, alcohol or marijuana and anxiety and depression amongst 12 year olds and, also reduced arrests and convictions for girls up to age 19. The life course of FNP mothers was improved through strengthened mother-partner relationships, a greater sense of mastery, less parenting role impairment due to drugs and alcohol use and reduced family poverty. The Government saved more than the cost of the programme in welfare payments alone by the time the children were age 12.

More specific detail on benefits

FNP improves pregnancy outcomes, child health and development and mother's life course in the short, medium and longer term. In the US research FNP children and mothers, mainly those who were high risk with low psychological resources, compared to children and mothers in the comparison group had:

Improved pregnancy outcomes

- 79% reduction in premature birth amongst mothers who smoked
- Fewer pregnancy related complications and infections
- 31% fewer closely spaced subsequently pregnancies

Improved child health and development

Increase in children's school readiness

- 50% reduction in language delays at 21 months;
- 67% reduction in behavioral/intellectual problems at age six

Increase in academic achievement

- 26% higher scores on school reading and maths achievement in Grades 1-3**

Better mental health and risk taking behaviour

- Lower rates of anxiety and depression at age 12
- Less use of tobacco, alcohol and marijuana at age 12
- Girls had had fewer pregnancies by age 19

Reduction in criminal activity

- 59% reduction in child arrests at age 15
- 90% reduction in PINS (US equivalent of supervision orders)

Reduced child abuse and maltreatment

- 39% fewer injuries
- 56% reduction in emergency room visits for accidents and poisonings
- 48% reduction in child abuse and neglect

Improved maternal self sufficiency and life course development

Fewer unintended subsequent pregnancies

- 23% fewer subsequent pregnancies by child age 2
- 32% fewer subsequent pregnancies

Increase in labour force participation by the mother

- 83% increase by the child's fourth birthday

Reduction in welfare use

- 20% reduction in months on welfare
- Saved the government over \$12,300 per family in welfare payments alone by time children aged 12 , greater than the programme cost of \$11,511

Increase in father involvement

- 46% increase in father's presence in household

More sustained relationships with partner

- 18% longer with current partner
- Longer time with an employed partner

Reduction in criminal activity

- 60% fewer arrests
- 72% fewer convictions

Put another way, FNP families compared to comparison group had:

At age 19

Child

- 43% fewer arrests (between 15 and 19, girls)
- 58% fewer convictions (between 15 and 19, girls)
- 57% fewer lifetime arrests (girls)
- 66% fewer lifetime convictions (girls)
- had fewer children (girls)

At age 15

Child

- 48% less verified incidents of child abuse and neglect
- 59% reduction in arrests
- 90% reduction in adjudication as persons in need of supervision (PINS) for incorrigible behaviour

Mother

- 61% fewer arrests
- 72% fewer convictions
- 20% less time on welfare*
- 32% fewer pregnancies
- 19% fewer subsequent births

At age 12

Child

- Improved academic achievement**
- Less use of cigarettes, alcohol or marijuana
- Reduced levels of clinical and borderline anxiety and depression

Mother

- Longer partner relationships
- Less time on welfare and food stamps
- Less money from Government for welfare assistance
- Less role impairment due to alcohol and drug use

At age 9

Child

- Lower mortality from preventable causes*
- 26% higher scores on school reading and maths achievement in Grades 1-3**

Mother

- 12% less time on welfare since birth of child
- 10% less time on food stamps
- 18% more time with current partner
- 41% fewer substances used in last three years (illegal drugs or moderate to heavy alcohol use)*
- 21% longer intervals in months between birth of first and second child

Age 6

Child

- 67% reduction in behaviour and intellectual problems

Age 4

Child

- 50% reduction in language development delay (standardised effect size 0.31)**
- Better behavioural development and executive functioning**

Mother

- 20% longer interval between 1st and 2nd births
- 83% increase in labour force participation
- 46% increased father presence in household

Age 2

Child

- 50-70% fewer hospitalisations for injuries and ingestion
- 50% reduction in language development delay at 21 months

Mother

- 23% fewer subsequent pregnancies
- 31% fewer pregnancies within 6 months of birth of first child
- Fewer beliefs about child rearing associated with child abuse and neglect

Pregnancy and birth

- 25% reduction in cigarettes smoked amongst smokers
- Improvements to diet
- Fewer pregnancy related complications
- 79% reduction in premature birth amongst mothers who smoked
- Increased birth weight amongst very young mothers

The above information is drawn from three different NFP Trials, each of which has followed families up at different points in time and measured different things which is why different outcomes are evident at different ages. This list sets out the main benefits observed, it isn't exhaustive. There were also a number of measures that showed no significant differences between the FNP group and the comparison groups, again these varied between the trials and time points.

* - only significant at 0.10

** - for mothers with low psychological resources

Cost effectiveness

- US evidence shows cost savings from FNP are substantial with up to \$5 saved for every \$1 invested by the time the children were 15, for high risk groups.
- Cost savings in the US range from \$17,000 to \$34,000 per child by the time they reach 15, with a \$3-5 return for every \$1 invested.
- US evidence shows programme costs recovered by the time children reached 4 years old and that savings grow over time.
- Most savings are to the public purse, in form of reduced welfare payments, reduced criminal justice expenditure and increased taxes due to increased earnings.
- Recently published US evidence suggests that NFP(FNP) saves the government substantial amounts in welfare payments alone with \$12,300 saved per family between the child being born and reaching 12 years old.

- Washington State Institute in its rigorous analysis of cost effective evidence based programmes has consistently rated NFP as one of the most cost effective preventative programmes for reducing crime, child abuse and maltreatment and risky behaviour amongst youths.
- Too early to say whether FNP is cost effective in England and Scotland but has potential for substantial cost savings by preventing adverse outcomes. For example if FNP prevents 250 children going into foster care it will save almost £7million in foster care costs in any one year and if it prevents 20 cases of serious conduct disorder it could save society £4.5m over the lifetime of these children.
- In England and Scotland , the local cost of delivering programme is estimated to be around £3,000 per client per year.

FNP and other early childhood programmes

The size of FNP effects are relatively large compared to other home visiting programmes and FNP is consistently rated by high quality reviews of evidence based programmes as one of the most effective preventative home visiting programmes for vulnerable young mothers and their children. (e.g. Aos 2004, 2008, 2009, Blueprints Centre for Violence Prevention, Coalition for Evidence based Policy).

FNP has many of the features identified by research as associated with effective early childhood interventions including:

- Focus on specific populations
- Uses evidence based implementation practices
- Provides intensive services
- Involve both parents and child
- Has mechanisms for ensuring fidelity to programme model is achieved so benefits are reproduced.

Evidence on FNP in England and implications for Scotland

As we are at a very early stage of testing FNP in Scotland it is important to note the findings and lessons learned across the sites in England.

FNP is being evaluated in England through a formative evaluation of the first ten sites, which has reported interim findings and will report finally early in 2011; and an RCT in 18 sites which will report in 2013. The RCT will assess whether FNP benefits families over and above universal services and offers value for money. Outcomes being measured include smoking during pregnancy, breastfeeding, admissions to hospital for injuries and ingestions, further pregnancies, and child development at age 2.

Early evaluation of FNP in England points to:

- high levels of engagement with hard to reach families. Around 87% of those offered the programme enrol on it and a high proportion continue to engage with the programme until their child reaches two years old. 85% of FNP mothers have incomes below the poverty line, 43% very low incomes and 75% no/minimal qualifications.

- strong engagement with fathers. More than half the fathers and partners had been present for at least one FNP visit;
- enthusiastic support from nurses, who are seeing changes take place in health behaviour, relationships, parental role and maternal well-being. They have also reported that their clients are more confident as parents, were playing with their children more, wanted to learn, and had aspirations for the future.
- early signs that the programme is having a positive effect on reducing smoking during pregnancy and increasing rates of breastfeeding.

Nurses report that FNP is playing a key role in protecting children by ensuring that children/families who need to be protected are identified early, preventing children entering the child protection system and working with families so they are able to leave child protection system.

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