Nurse Family Partnership: How to Bring a Program to Scale

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Abstract

The field of health encompasses not only physical, mental, and spiritual aspects but also the research necessary to inform how we provide health-related services. Recently, attention and federal funding has increased for Nurse Family Partnerships (NFP), a home visitation program for low-income, first-time mothers. NFP, an evidence-based program, has been shown to be effective in improving outcomes for mothers and children including pregnancy outcomes, decreased dysfunctional caregiving, higher quality maternal life course, and reduction in at-risk behaviors by the children. The NFP program has been replicated many times in different communities and continues to report positive findings for mothers and their families. What is less well known; however, is the process for implementing, replicating, and/or bringing NFP to scale. The purpose of this paper is to assist local agencies (e.g. The Council for Children’s Rights, Community Health Services) in bringing the NFP program to scale in Charlotte, North Carolina. Given the potential impact on health for mothers and children, it is imperative that NFP be highly successful in implementation. This paper gives a brief overview of the NFP program and provides more detailed information on implementation factors specifically for NFP (i.e. policy and advocacy, financial stability, agency identification/development, staff identification, training, evaluation, and potential barriers) and implementation factors in general from the literature (i.e. exploration, preparation and adaptation, early implementation, full implementation, and innovation and stability). The information in this paper will be utilized when bringing NFP to scale in Mecklenburg County, NC.

Keywords: Nurse Family Partnership, implementation, replication, evidence-based program
There is a large amount of literature regarding best implementation practices and lessons learned for beginning or starting a new program. At the same time, the amount of literature decreases significantly for implementation of evidence-based programs. This also holds true for the implementation literature on Nurse-Family Partnerships (NFP). While there is ample literature on empirical research on the NFP program, few studies have examined the best practices for replicating or bringing NFP to scale. Clearly this is an important need when starting a new NFP in a particular community or bringing NFP to scale. The following sections will briefly describe the NFP program, report on implementation/replication best practices of NFP, and report on the general implementation/replication literature. The latter two sections will report on synthesized information from the literature in which common themes are discussed.

**Nurse-Family Partnership**

NFP is a 501(c)3 organization designed to address poor birth outcomes, child abuse and neglect, welfare dependence, and poor maternal life course (Dawley, Loch, Bindrich, 2007; Olds, Hill, O’Brien, Racine, & Moritz, in press; Olds, 2006). NFP was a service originally provided in Elmira, New York to pregnant mothers; however, positive effects from the program were seen in low-income, first-time mothers. Expansion of the program has taken place across many states and in other countries and serves low-income, first-time mothers for a period of two and a half years (Howard, Husain, & Velji, 2005; Olds et al., in press). The theory of the program stems from frameworks in ecology, self-efficacy, and attachment. The program theory states the importance of improving the maternal and social environment via natural supports and community
resources, identification of behavioral influences, and the promotion of positive caregiving (Dawley et al., 2007; O'Brien, 2005; Olds et al., in press; Olds, 2006; Zeanah, Larrieu, Boris, & Nagle, 2006). The program design consists of visits to the homes of clients by nurses. As previously stated, the clients are low-income, first-time mothers who also have had no previous live births and are at or less than 28 weeks gestation (Dawley et al., 2007; Olds, 2006). The visits total 13 during pregnancy and 47 after the child’s birth (Olds et al., in press; Olds, 2006) although this varies based on when the client is enrolled in the program. Nurses receive training through the NFP national office and carry a caseload of 20-25 families (Dawley et al., 2007; Olds, 2006; Olds et al., in press). The content of the visits covers three major activities: enhancement of the mother's behavior to affect pregnancy outcomes, health and development of the child, and parental life course; help establishing supportive and positive relationships with natural supports; and to link mothers and families with other community resources as needed (Dawley et al., 2007; Olds, 2006; Olds et al., in press).

**NFP Implementation/Replication**

For many communities throughout the country, there exists a need to serve (or better serve) low-income, first-time mothers. The NFP program has been replicated many times in different communities and continues to report positive findings for mothers and their families (Kitzman, Olds, Henderson, Hanks, Cole, Tatelbaum et al., 1997; Olds, 2006; Olds et al., in press; Olds, Kitzman, Hanks, Cole, Anson, Sidora-Arcoleo et al., 2007; Olds, Robinson, O'Brien, Luckey, Pettitt, Henderson et al., 2002; NFP, 2010). What is less well known; however, is the process for implementing, replicating, and/or bringing NFP to scale. Only recently has research started to
examine the important factors that need to be addressed when replicating or bringing NFP to scale in a community (Olds et al., in press). Common themes include the need for policy and advocacy, financial sustainability, agency identification/development, staff identification, training, evaluation, and potential barriers. The aforementioned themes are discussed further below.

Policy and Advocacy

An important first step when implementing any program is to be sure that the community and key stakeholders view the program as needed and valued. This process should generate a climate of support from the program and engage potential clients, service providers, evaluators, policy makers, and administrators (Howard et al., 2005; Olds, 2006; Olds, 2007; Olds et al., in press; Stavrakos, Summerville, & Johnson, 2009). After garnering support for the program, existing agencies that serve the intended population should be identified (Olds et al., in press) to avoid duplication of services and to establish a collaborative relationship with agencies who may be a referral source to and from the program (Olds, 2006; Stavrakos et al., 2009). Finally, an analysis of funding policies that impact a community should be done to identify any potential problems (Olds et al., in press). For example, financial support for a program needs to identify any limitations that certain funders may have (i.e. funding for only one year). An analysis of funding policies includes any barriers to operation of the program, as well as support that is sustainable and allows room for growth.

Financial Sustainability

In order to ensure adequate funding for the program, the operating costs need to be determined as well as the identification of funding sources. The approximate cost for
running the program is $2,914 to $6,463 per family per year (NFP, 2010). This cost will vary depending on if when a program is first starting up or is being replicated or expanded to other sites. Additionally the costs will vary depending on the nurses’ salaries (NFP, 2010). When receiving funds through the government, the NFP national office advocates for funding that is distributed among several government agencies to reduce the pressure on any one agency’s budget (Olds et al., in press). Research has also advocated for state-based initiatives (agencies that organized the states’ initiatives) and funding. NFP with state-based initiatives generated more community support than independent agencies and state-level funding increased the financial stability of NFP sites (Howard et al., 2005). Additionally, it is easier to solicit federal funding if the program is state-based (Howard et al., 2005). At the same time, the findings from most of the reports have come before the current government administration ear-marked dollars for NFP.

**Agency Identification/Development**

Another important factor to consider when implementing or replicating NFP is deciding which agency or agencies will host the program. Implementing agencies need to have the appropriate organizational capacity, adequate connections to other community services, the ability to recruit and retain nurses, and have a commitment to sustainability (Stavrakos et al., 2009). Furthermore, implementing agencies should have a record of success in providing services (NFP, 2010; Stavrakos et al., 2009) and experience with providing evidence-based services (Howard et al., 2005; Olds et al., in press). When deciding on the implementing agency it is also important to keep in mind
that state-based sites have been found to take longer to get started; however, they are quicker to add additional sites compared to independent sites (Howard et al., 2005).

**Staff Identification**

Research on NFP has encouraged the nurses that are providing services to have a minimum of a bachelor’s degree in nursing and nurse supervisors to have master’s degree in nursing (Olds et al., in press). The nurses are registered and usually have several years of experience in the areas of maternal and child health, behavioral health, pediatrics, and other related areas (NFP, 2010). The implementing agency should also provide additional opportunities for team building (Stavrakos et al., 2009) and for the nurses to gain additional training and skills. This is also discussed in the training and potential barriers section. Research has also been conducted on the factors that contribute to nurse turnover. This continues to be issues as the Colorado site has seen a 35% turnover rate in the first three years and Memphis had a 50% turnover rate due to a nursing shortage (Gomby, Culross, & Behrman, 1999; Lewis, 2007). In one of the few studies to examine nurse retention in NFP, nurses were asked about factors that led them to work and persist at NPF. The study found that “nurses who thrive doing NFP work tend to have good mental and physical health, emotional intelligence, and a deep humanity. They empathize with clients, look beyond undesirable behavior to see strengths, and facilitate growth” (Lewis, 2007, p. 72). The aforementioned characteristics are ones that should be identified in nurses hired to work for NFP.

**Training**

Nurses and nurse supervisors are trained by the NFP national office (O’Brien, 2005) through in-class and distance learning sessions (NFP, 2010). The cost of the
training is approximately $2,500 per nurse and $3,000 per supervisor (plus food, travel, and lodging; O’Brien, 2005) and this should be taken into consideration when planning for start-up costs. While the initial training takes place in conjunction with the NFP national office, nurses and nurse supervisors should also be provided with opportunities for additional skills training (Stavrakos et al., 2009), especially areas that nurses may find difficult or challenging to address such as mental health (Zeanah et al., 2006). In one study, nurses estimated spending 30-75% of their time on mental health issues and providing nurses with mental health education and training is important for retention (Lewis, 2007).

**Evaluation**

Evaluation is an important component as it assesses not only fidelity to the model but also provides the opportunity to make changes or adjustments as problems or issues arise. Evaluation results should be timely and used to guide efforts for continuous quality improvement (Olds, 2006; Olds, 2007; Olds et al., in press; NFP, 2010; Stavrakos et al., 2009). The NFP program is evaluated in terms of fidelity to the model through the Clinical Information System (CIS) in which site outcomes are compared to national averages and standards set by NFP (O’Brien, 2005). The cost of the evaluation system is approximately $1,000 for the initial system and $6,000 per year for services and technical assistance (O’Brien, 2005) and this should also be considered when planning for start-up and operating costs. There is also a need to invest in local evaluation (Stavrakos et al., 2009) although this would have to be developed by the local NFP as the national office does not provide local evaluation tools at this time. A local evaluation would allow for additional information to inform a
community about their specific needs and provide a site to prepare for linking of other services to that specific community need (e.g. education for adolescents).

**Potential Barriers**

Several potential barriers to implementation and fidelity have been identified in the literature. The potential barriers include attrition, nurse turnover, program content, and language/literacy. The most reported reasons for attrition were declining to participate further by the client, the client moves from the area, the client cannot be located, and the client has missed an excessive number of appointments (Hicks, Larson, Nelson, Olds, & Johnston, 2008; O’Brien, 2005; Olds et al., in press). Procedures should be in place to minimize these reasons for attrition. Nurse turnover is also a potential barrier to implementation and fidelity. In Memphis, nurse turnover was approximately 50% due to a community-wide shortage of nurses. This resulted in increased competition of nurses (Gomby et al., 1999). Nurse turnover has also been related to the ability to address the issues of the clients. Specifically, nurses have struggled when attempting to provide services to clients with mental health issues. In some cases, nurses have questioned their ability to recognize and address mental health issues (Gomby et al., 1999) and steps should be taken to reduce this (e.g. consults with a mental health clinician, additional training, and/or established linkages to community mental health resources and services).

Another potential barrier addresses issues related to fidelity to the model. The NFP program has recommendations on the amount of time spent on program content. For example, NFP recommends that during pregnancy, the nurse spends approximately 23-25 minutes on the maternal role (O’Brien, 2005). Evaluations on the time spent on
each objective have noted a tendency for nurses to spend less time than recommended on the maternal role (O’Brien, 2005). For reasons of fidelity and fidelity-related outcomes, it is important to adhere to the NFP model (Olds, 2006; Olds, 2007; Olds et al., in press) although it is unclear if this has an impact on outcomes. At the same time, when a particular need arises for an individual or community, program aspects may be modified to fit that particular need (Boris, Larriue, Zeanah, Nagle, Steier, & McNeill, 2006) although more research is needed to identify to what extent program aspects be modified to fit individual community needs.

Finally, language and literacy may be issues when providing services. Although these issues have not been addressed in the NFP literature, it is important to be cognizant of participants who speak English as a second language or have trouble reading or writing as these factors have been found to be related to improved health care (Ngo-Metzger, Massagli, Clarridge, Manocchia, Davis, Iezzoni et al., 2003).

**General Implementation/Replication**

As previously stated, there is a large amount of literature on the best practices or lessons learned about implementation when beginning or starting a new program. While there is less available research on implementation of evidence-based programs, the information from the literature on general implementation practices mirrors that of the information on implementation of evidence-based programs and information on implementation of NFP. The following sections summarize the implementation literature in hopes of adding to the knowledge base for implementing NFP. The implementation information is grouped into the categories suggested by the National Implementation Research Network (NIRN) and others (Child Trends, 2008; Fixsen, Naoom, Blasé,
Friedman, & Wallace, 2005). The information within each group combines information from NIRN and others in the field that are identified as areas for extra attention. It is important to note; however, that the following information on implementation is not exhaustive of all the necessary and recommended activities but highlights components that are particularly important for implementation.

**Exploration**

The exploration phase of implementation involves an assessment of community needs, program needs, and community resources. The assessments are designed to provide a match between community needs and program services and also to identify the resources necessary for the program to provide services (Child Trends, 2008; Fixsen et al., 2005; Kohl & Cooley, n.d.). Furthermore, the resource identification should identify the specific resources needed for scaling up or starting a program and the resources needed to operate the program (Fixsen et al., 2005; Kohl & Cooley, n.d.). This is particularly important when bringing any program to scale. For example, it is important to remember that the resources needed to bring NFP to scale in Mecklenburg County are not the same as the resources needed to operate at scale. Additionally, there are several key components recommended in the community and program assessments. The components are not mutually exclusive and should be done in conjunction with the assessments. The first component involves key stakeholder buy-in. Key stakeholder buy-in should include endorsement of a community need and that the program identified is the best option for the need (Fixsen et al., 2005; Kohl & Cooley, n.d.; Naoom, Wallace, Blasé, Haines, & Fixsen, 2004). The second and third components involve characteristics of the program that will address the community
need. Specifically, the identified program should have a clear and coherent theory of change and be evidence-based. This will help ensure high quality implementation (Astuto & Allen, 2009; Daro, 2009; Kohl & Cooley, n.d.; McCall, 2009; Mihalic, 2002; Urban Health Initiative [UHI], n.d.).

Preparation & Adaptation

The next phase of implementation constitutes activities that need to be completed before services are provided to the first client (Child Trends, 2008; Fixsen et al., 2005; Wiseman, Chinman, Ebener, Hunter, Imm, & Wandersman, 2007). Activities include infrastructure development for the program implementers, identification of staff and administration personnel, and establishing sufficient funding. Without the proper infrastructure, agencies will not be equipped to provide services or meet program requirements. Further, sufficient infrastructure is related to enhanced program adoption and implementation (Rohrbach, Grana, Sussman, & Valente, 2006). Agencies may need assistance in the following areas: building their organizational capacity (Kohl & Cooley, n.d.; Rohrbach et al., 2006; Wiseman et al., 2007), establishing training and technical assistance contacts (Rohrbach et al., 2006), establishing a method for collecting and reporting on program delivery (Fixsen et al., 2005; Kohl & Cooley, n.d.; Naoom et al., 2004; Rohrbach et al., 2006), and identifying administrative support personnel (Child Trends, 2008; Fixsen & Blasé, 2009; Fixsen et al., 2005). Program delivery staff and program support personnel are also important for program adoption and implementation. Strategies need to be identified to recruit and select qualified nurses, nurse supervisors, and support personnel (Child Trends, 2008; Fixsen & Blasé, 2009; Fixsen et al., 2005). Nurses, supervisors, and support personnel also need to be
trained in program provision and provided with coaching and consultation (Child Trends, 2008; Fixsen et al., 2005; Naoom et al., 2004). The roles and responsibilities of each position need to be clearly specified and communicated (Kohl & Cooley, n.d.) and each employee needs to be provided with support during both scaling-up and operating phases (Kohl & Cooley, n.d.). As previously stated, there are different needs for the scaling-up phase and the operating at scale phase. This important point is also true for funding in that resources need to be identified and secured for both the scale-up effort and for operating at scale. Furthermore, funding needs may vary among implementing agencies depending on service capacity and thus funding should be adjusted to fit each specific site’s needs (UHI, n.d.).

**Early Implementation**

The concept of early implementation is important as it implies a period of change. The implementation of any program will require modifications, adjustments, or changes for some aspect of the program operations (Fixsen et al., 2005) and can be identified through a process evaluation. A process evaluation will allow program implementers to assess the degree to which activities are happening as expected and which areas need improvements (Center for Disease Control, 2009). For example, a process evaluation may identify whether or not nurses are being trained in a timely manner or if an operating agency has the technological capacity for productive work. Thus, it is important to determine before implementation begins how decisions will be made regarding whether or not the program has been implemented successfully (Wiseman et al., 2007). In the case of NFP, early indicators of successful implementation may come from the factors that have been identified as especially important for implementation
(i.e. policy and advocacy, financial stability, agency identification/development, staff identification, training, evaluation, and barriers). In this way, implementers of NFP can utilize a process evaluation with these factors as indicators of early implementation. The results of the process evaluation can be used to make modifications, adjustments, and/or changes to program operations if the factors are not being met or have not been completed.

**Full Implementation**

Full implementation occurs after the early implementation learning process in which adjustments were made to ensure the program operates as intended. Full implementation involves operations that are functioning at full capacity (e.g. staff and clients) and the activities of the program become routine (Fixsen et al., 2005). Given that the process evaluation has provided insight and information that will contribute to the successful operation of the program, the next important question to answer is whether or not the program is having the intended impact. For this goal, an outcome evaluation can provide evidence as to whether or not the program worked, produce information for continued financial support, and identify aspects to make the program more successful (Wiseman et al., 2007). Additionally, an outcome evaluation will aid in the identification of critical outcomes, theory of change and the methods needed for outcome measurement.

**Sustainability/Innovation**

The final stage in the implementation process involves an opportunity to learn from the implementation process and to focus on potential changes in macro-level factors that can impact the program (Fixsen et al., 2005). Program implementers may
be able to provide insights on important aspects for fidelity and community impact to all members of the health field (funders, researchers, practitioners, clients, and future NFP sites). At the same time, program implementers need to remain cognizant of the factors that may affect the way the program operates (e.g. changes to funding streams, changes in need, etc; Fixsen et al., 2005). Once a program is brought and operating at scale, other factors may influence the success of the program. Researchers in the nonprofit sector have advocated for nonprofits to collaborate with intermediary organizations for continued support. In this way, the implementers of NFP could establish a relationship with an intermediary organization that could provide information pertinent to sustainability and/or growth of the program (i.e. new measurement tools, changes in government funding streams; Abrahamson & McCarthy, 2002).

Conclusion

The implementation of any program is not an easy task and requires a collaborative approach before, during, and after the program has been implemented. The intention of this paper was not cover every aspect of general implementation or every implementation aspect of NFP but, instead, to provide a framework of activities that increase the likelihood of successful implementation. Additionally, this framework provides a template for researchers, practitioners, and other community members to utilize, modify, and/or update as the implementation of NFP takes places locally. Given the potential impact that NFP can have on community health, it is extremely important that the program be implemented as successfully as possible.

Given the aforementioned information, the implementation and going-to-scale efforts for NFP may seem like a daunting task. At the same time; however, several
studies have described challenges or recommendations of going-to-scale and many of them are met with solutions embedded in the NFP program. For example, Welsh, Sullivan, and Olds (2010) describe the following as challenges of going-to-scale: efficacy demonstration, heterogeneous populations, fidelity to the model, implementation context, and attribution of effects. As previously mentioned, research has shown NFP to be efficacious, achieve important outcomes for different populations, provide tools for ensuring fidelity to the model, and evidence of effectiveness. The challenges also highlight the need for strong leadership and community buy-in (implementation context) and identification of specific geographical challenges via local evaluation (fidelity to the model) previously mentioned in this paper.

Similarly, researchers have provided criteria for implementation and going-to-scale via standards for achieving efficacy, effectiveness, and broad dissemination (Flay, Biglan, Boruch, Castro, Gottfredson, Kellam, et al., 2005). NFP has met the criteria for efficacy and effectiveness and as such is important to meet the criteria for broad dissemination. Flay et al. name the following criteria for broad dissemination: effectiveness, going to scale, cost information, monitoring and evaluation, replication studies, and sustainability. Again, the NFP program has demonstrated effectiveness and replicability; provided information on going-to-scale, cost, and monitoring; and emphasized the need for sustainability methods. The criteria described by Flay et al. also highlighted the need for local evaluation as well as financial sustainability that was discussed earlier in the paper.

Recent trends in the research and policy arenas have advocated for the funding of programs that are both efficacious and effective (Backer, 2000; Flay et al., 2005;
Welsh et al., 2010). Taken together, NFP has several decades of research demonstrating both efficacy and effectiveness. Additionally, NFP has met other standards and criteria for evidence-based programs to be disseminated and brought-to-scale. Although going-to-scale and replication often come with many challenges the NFP program, along with the information in this paper, provide information to increase the success of the implementation efforts.
References


South Florida, Louise de la Patte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).


