

Attachment II

Implementation Year 4 Mid-Year Evaluation Report

**Child Abuse Prevention/Protection Collaborative
Report Date: 5-30-07**

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Family Outreach Network

Introduction

The evaluation summary of the Family Outreach Network covers the reporting period from March 1, 2004 through January, 2007 which reflects an additional six months of data since the last report submitted. Many of the data elements analyzed and reported in the last few reports have remain unchanged, such as the families' demographic information, therefore, this evaluation will reflect an analysis of new data only. The analysis of the 51-A recidivism data conducted by Brandeis University, based on a report provided by the MSPCC Evaluation Department, covers the period March, 2004 through September, 2006, which provides an additional year of data since the last report.

Evaluating the Family Outreach Network (FON)

Number of Referrals

From March, 2004 through January, 2007, 322 families have been referred to FON from the Department of Social Services (DSS) in Worcester. An additional 14 families were referred from the Child Protection Program at UMass Memorial Children's Medical Center (CPP). As the CPP families are not included in MSPCC's pilot, an analysis pertaining to CPP will be provided separately.

Engagement and Graduation Rates

From March, 2004, through January, 2007, of the 322 families referred to FON/Worcester Connecting Families, 230 accepted services once contacted by Connecting Families Family Advocates-- reflecting a 71% acceptance rate.

Seventy-three percent (168) of the families engaged in services at least through the initial assessment period.

Thirty-seven percent (62) of the families who remained engaged in services met their goals and graduated from the program.

Engagement Over The Previous 3 Years

Engaging high-risk families in programs such as the FON/Connecting Families is always a challenge. Estimates of the proportion of high-risk families who refuse the offer of services or fail to complete programs offered range from 35% to 70% (Kazdin, 2000; Mueller & Pekaril, 2000) with higher rates among families receiving involuntary or court-ordered services (Rooney, 1992, cited in Dawson & Berry, 2002). With that in mind, the overall refusal rate of 36.9% across all three years among referrals to the Connecting Families program could be considered on the low end of the spectrum.

Across all six Connecting Families program sites, the rates of refusal to participate in the program once the referral has been made have fluctuated over the past three years from a low of 23.6% in 2004 to a high of 43.7% in 2005 and back down to 37.3% in 2006, potentially suggesting that efforts to reverse the rising rates of refusals are meeting with some success. These refusal rates also suggest the possibility that during the first year of the program, DSS workers were closely adhering to the referral criteria

which included families referred to DSS for 51-As that involved children younger than 12 years, *who had not had previous encounters with DSS, and for whom the 51-A reports were not supported*. If this was indeed the case, the relatively low refusal rates in the first year might in part be attributable to that. Moreover, the rise in refusal rates during the second year of the project may, in part, be associated with the tendency of some DSS workers to drift from a stricter adherence to the project's referral criteria. Analysis of the data by the Brandeis team has demonstrated that many of the families referred to the project over the years actually had previous encounters with DSS, in some instances more than one such encounter, and there is anecdotal evidence that some DSS workers began to see the Connecting Families project as an alternative to supporting reports of 51-As. That is, rather than supporting 51-As for some families, some DSS workers appear to have begun referring them to the Connecting Families project. This drift by some DSS workers from stricter adherence to referral criteria may be associated with the rise in refusal rates during the second year of the project. Once the increase in refusal rates was revealed by the ongoing evaluation of the program, efforts were instituted to lower the likelihood of refusal among new referrals by new protocols, as described below.

During the summer/fall 2005, MSPCC developed new protocols to address this issue. "Teaming" strategies such as the accompaniment of the Family Advocate by a clinical specialist to the first family home visit and an increase in clinical expertise and consultation time to the program were implemented as a way to better engage a family.

Although 41.8% of the families who were referred to services in 2006 are still open cases, (that is, they are either still involved with the program or they have only recently been referred and their status is still unknown), it appears that the rates of those

who initially agreed to services, but did not engage at least through the initial assessment period, have decreased over the past years as well--from 24.0% in 2004 and 26.1% in 2005 down to 17.0% in 2006.

The rate of successful graduation (defined as having met their goals upon case closure) among those who agreed to services and whose cases have been closed was 32% across all sites and 37% in Worcester. If just those families who engaged in the program and whose cases have been closed are considered, the graduation rate across the six sites is 46%.

Prior DSS Reports among Families Engaged with the FON

The Connecting Families program was designed to provide secondary prevention services (early intervention) for families who are at risk for child abuse and neglect, but have not yet experienced an incident. Families are identified as “at-risk” by virtue of a 51-A report that was not supported. The assumption was that the families would have minimal history, or no prior history at all with the Department of Social Services. Therefore, the goal was to intervene early, provide supportive services to strengthen the family, and prevent an incident of child abuse and/or a continual decline in functioning and thus, prevent future state intervention.

While this held true for many families, there were a significant number of families who were referred to the program who had histories of multiple prior reports and/or previously supported reports. Of the families referred, 49% across the state and 44% in Worcester had at least one prior report to DSS, with 28% of these families statewide and 33% in Worcester having had at least one previously *supported* report.

In addition, families referred to the FON (and the Connecting Families program across the state) are faced with complex issues whose needs are dramatically different from those that were anticipated. Family incomes are less than \$24,000 for 73% of the Worcester referrals (71% statewide) 52% of caregivers (both in Worcester and statewide) have been identified as having a mental health issue, and 45% of the families in Worcester (43% statewide) had at least one child with an identified mental health issue. A large proportion of the referred families have a history of domestic violence (41% in Worcester and 42% statewide), while a majority (56% in Worcester and 64% statewide) were indicated as being at high risk for abusive or neglectful parenting behaviors as measured by a standardized parenting assessment tool. At the same time, a substantial minority (23% in Worcester and 37% statewide) have chronic health conditions at referral. It is perhaps no wonder that nearly half of the referred families (49% in Worcester and 48% statewide) had self-reported high levels of unhappiness as reported on the unhappiness sub-scale of the Child Abuse Potential Inventory (CAPI).

Comparing Very High versus Very Low Service Utilizers

Service usage for families who engaged in services, was analyzed. In previous analyses, engaged FON families were divided into high and low service utilizers by dividing them into two groups at the median. This was done to maximize the size of each group. However, this risked obscuring differences between low and high service users because of the potential similarity of families close to the median on either side.

Therefore, for this report they were divided into three groups:

(1) 30 low service users who used 35% or fewer of the total number of services used by engaged families;

(2) 29 moderate service users who used more than 35% but less than 65% of total services; and

(3) 32 high service using families who used 65% or more of the total services.

The high and low service utilization groups were then compared on demographic and other variables of interest (ignoring the moderate service users).

The results were nearly identical with the previous analysis (see Table 1 below), although one or two of the differences that were found to be significant last time were not significant this time, although they tended to “just miss” significance. The reason that the differences found to be significant between the High and Low Service Use Groups in the last analysis did not reach statistical significance in the current analysis is most likely because the sample size of the two groups is smaller. Previous analyses divided the service users at the median and as previously stated, risked obscuring differences. In the current analysis the sample was divided into three, which has lowered the ability (or power) to detect truly significant differences. For example, when dividing the services users at the median, it appeared that the average age of female head of household of the High Service Use Group was significantly older than the female head of household of the Low Service Use Group. This was not the case in the current analysis.

Service utilization across the other five Connecting Families sites was similar to Worcester also did not find significant differences between High and Low Service Use Groups.

Table 1. Comparison of High and Low Service Users.

	Low Service Users	High Service Users	Statistical Test	Significance
Age of Female Head of Household	n = 29 30.8 ± 7.6	n = 30 34.6 ± 6.8	$t_{(57)} = 1.99$.051, ns
Number in household	n = 29 3.8 ± 1.8	n = 30 4.4 ± 1.6	$t_{(57)} = 1.31$.ns
Number of children in the household	n = 29 2.3 ± 1.5	n = 30 2.6 ± 1.3	$t_{(57)} = 0.87$	ns
Primary caregiver receives public aid?	n = 28 20 (71.4%)	n = 30 23 (76.7%)	$X^2_{(1)} = 0.65$	ns
Ethnicity	n = 29	n = 30		
African American	6 (20.7%)	1 (3.3%)	$X^2_{(3)} = 7.34$.061, ns
Asian	1 (3.4%)	0		
Hispanic	11 (37.9%)	9 (30.0%)		
White	11 (37.9%)	20 (66.7%)		
White Nonwhite	n = 29 11 (37.9%) 18 (62.1%)	n = 30 20 (66.7%) 10 (33.3%)	$X^2_{(1)} = 4.88$.03
Number Years of Education	n = 26 Mean = 12.5 sd = 2.8	n = 29 Mean = 12.1 sd = 2.9	$t_{(53)} = 0.42$	ns
Primary caregiver has a disability	n = 29 5 (17.2%)	n = 30 5 (16.7%)	$X^2_{(1)} = 0.003$	ns
Primary caregiver employed	n = 29 12 (41.4%)	n = 29 12 (41.4%)	$X^2_{(1)} = 0.00$	ns
Family income	n = 28	n = 30		
< \$11,000	15 (53.6%)	10 (33.3%)	$X^2_{(3)} = 3.62$	ns
\$11,001 - \$18,000	5 (17.9%)	5 (16.7%)		
\$18,001 - \$24,000	1 (3.6%)	4 (13.3%)		
> \$24,000	7 (25.0%)	11 (36.7%)		
Child Has Mental Health Problem	n = 25 12 (48.0%)	n = 31 17 (54.8%)	$X^2_{(1)} = 0.61$	ns
Adult in Household Has Mental Health Problem	n = 27 11 (40.7%)	n = 31 24 (77.4%)	$X^2_{(1)} = 7.36$.007

New Measures: the Child Abuse Potential Inventory (CAPI) and the Adolescent-Adult Parenting Inventory (AAPI)

In November of 2005, two new measurement tools that assess abusive and neglectful parenting practices were introduced to the assessment protocol of Connecting Families. The first measure, the Adolescent-Adult Parenting Inventory (AAPI), is a well-established measure of child abuse and neglect risk, which captures several dimensions associated with potential child-abuse and neglect behaviors. For the second measure, a shortened version of the Child Abuse Potential Inventory (CAPI) comprising two subscales of the full CAPI--Unhappiness and Distress, was used. Each of the two instruments is administered to participating families at the commencement and conclusion of their involvement in the program.

Because most of the families who were administered the two instruments during their first interview have yet to complete their participation in the program, results can only be reported statewide, and even then there are still not enough data to draw any strong conclusions about the differences evidenced by the families after their involvement in the FON or Connecting Families programs.

However, the findings do appear to be trending in a positive direction:

1) It appears that at the initial assessment 40% of caregivers statewide showed elevated scores on the AAPI scale--indicating that the parent is likely to fear spoiling their child, is unlikely to understand or value their child's developmental needs, is likely to lack nurturing skills, and tends to be unable to handle parenting stresses in general. However, by the time they finished their involvement with the FON or Connecting Families programs, only 29% of the families fell into this elevated range, suggesting that

their parenting skills were beginning to show more understand of their children's true developmental needs.

2) Scores on the AAPI also indicated that 28% of caregivers at their initial assessment had scores indicating elevated likelihood to perceive their children as objects for adult gratification, to treat their children as a confidant or peer, and to expect their children to make life better for them by providing love, assurance, and comfort. By the time families had completed their participation in the program and completed their second assessments, only 14% of the families showed elevated scores in this regard. This was a statistically significant difference ($p < .05$).

A comparison of the scores on the CAPI indicated a significant improvement in the level of parental distress between parents' initial evaluation and their final evaluation at closure. Elevated levels of self-reported distress were found among 28% of the caregivers at their initial assessment versus only 16% reporting such high levels of distress in their final assessment. This is a particularly important finding because elevated levels of distress are known to be related to high levels of anxiety, depression, and loss of emotional and behavioral control.

Brandeis University Analysis of 51-A Recidivism Rates

Re-report Rates among Families Participating in Connecting Families and a Matched Comparison Group March 2004 through September 2006

Another year's worth of data regarding re-reports to DSS among families participating in the Connecting Families program and a match comparison group allowed last year's analysis to be repeated with a sample size nearly double that used in the original analysis. In these analyses, CF Families were compared to Matched Families

based on the elapsed time to a re-report to DSS of alleged maltreatment using survival analysis, i.e., how long families “survived” without a subsequent report. The first set of these analyses examined all CF Families (N = 1158) and Matched Families (N=1158) families as follows:

- Elapsed time (i.e., survival time) to any re-report of the family to DSS
- Elapsed time (i.e., survival time) to the first supported re-report, if any (ignoring any intervening unsupported re-reports)

Survival analyses were also performed on five subsets of CF Families based on the status of their CF cases and their level of engagement in CF. For each subset, the CF Families and Matched Families were again compared based on the elapsed time to any re-report and to the first supported re-report. The total of the four subsets does not equal the total number of closed cases because at the time of the analysis, data were incomplete for 16 cases.

- CF Families with closed CF cases (N = 989)
- CF Families who refused CF services (N = 381)
- CF Families whose cases were closed before they completed the Initial Assessment Period (Pre-IAP) (N = 205)
- CF Families whose cases were closed after they completed the IAP but who did not graduate (Post-IAP) (N = 221)
- CF Families who graduated (N = 166)

Two other subsets of CF Families and Matched Families were analyzed based on elapsed time to any re-report and to the first supported re-report: those where the initial

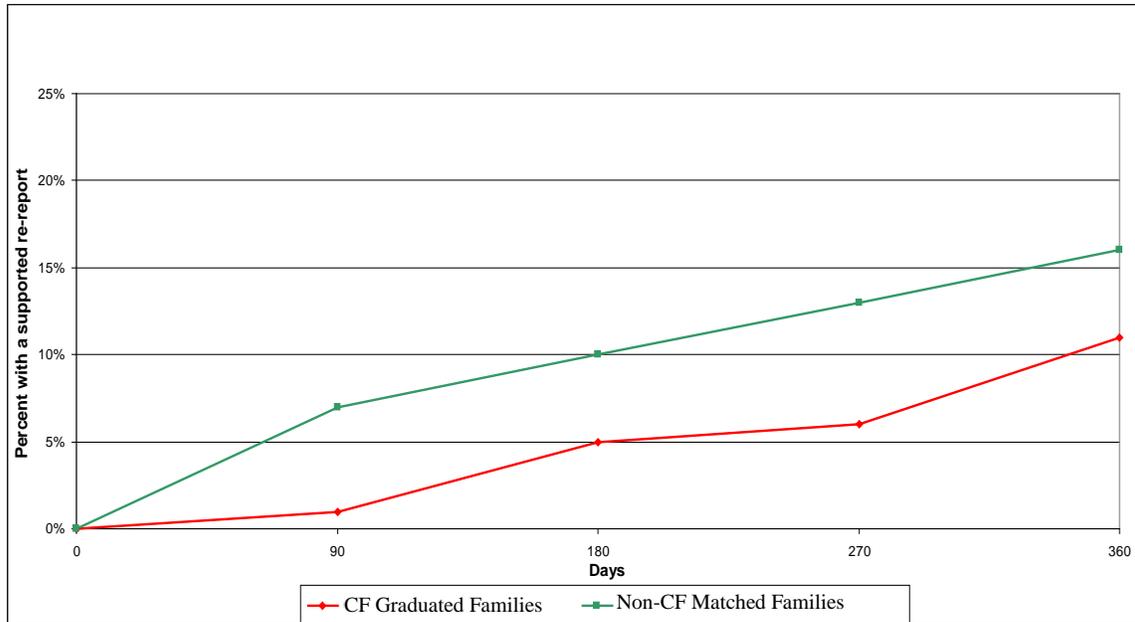
unsupported report of alleged maltreatment was for neglect¹ (N = 706) and those where the initial report was for a type of maltreatment other than neglect² (N = 452). These two groups are mutually exclusive.

In general, the results were very similar to those reported last year. There were few significant differences between the CF Families and the Matched Families, regardless of how the data were analyzed. There were some interesting trends observed, however. These will be reported here, primarily through the use of graphs, which illustrate the differences among the ways in which different groups changed over time. Figure 1 below illustrates the cumulated rate of supported re-reports over a year's time among all graduates statewide in the Connecting Families program as compared to their Matched Families cohort. Here we see that at one year from their initial unsupported re-report, 16% of the Matched Families had had a supported re-report, compared to 11% of those families who participated in and graduated from Connecting Families.

¹ These families were reported for suspected neglect without any simultaneous report of suspected sexual or physical abuse.

² These families were reported for: 1) suspected sexual or physical abuse (and possibly also for neglect); or 2) for suspected maltreatment categorized as "Other" if suspected neglect was not also simultaneously reported. In the child maltreatment field, sexual and physical abuse are considered more severe than neglect and the likelihood of re-reporting has been found to differ from that for neglect. Therefore, these types of maltreatment take precedence over neglect if both are simultaneously reported and are analyzed separately. Similarly, the literature has found that reports of "Other" maltreatment, without suspected neglect also being simultaneously reported, have a re-reporting pattern more similar to sexual and physical abuse than to neglect. Therefore, for analysis, they are included in this grouping of suspected maltreatment other than neglect.

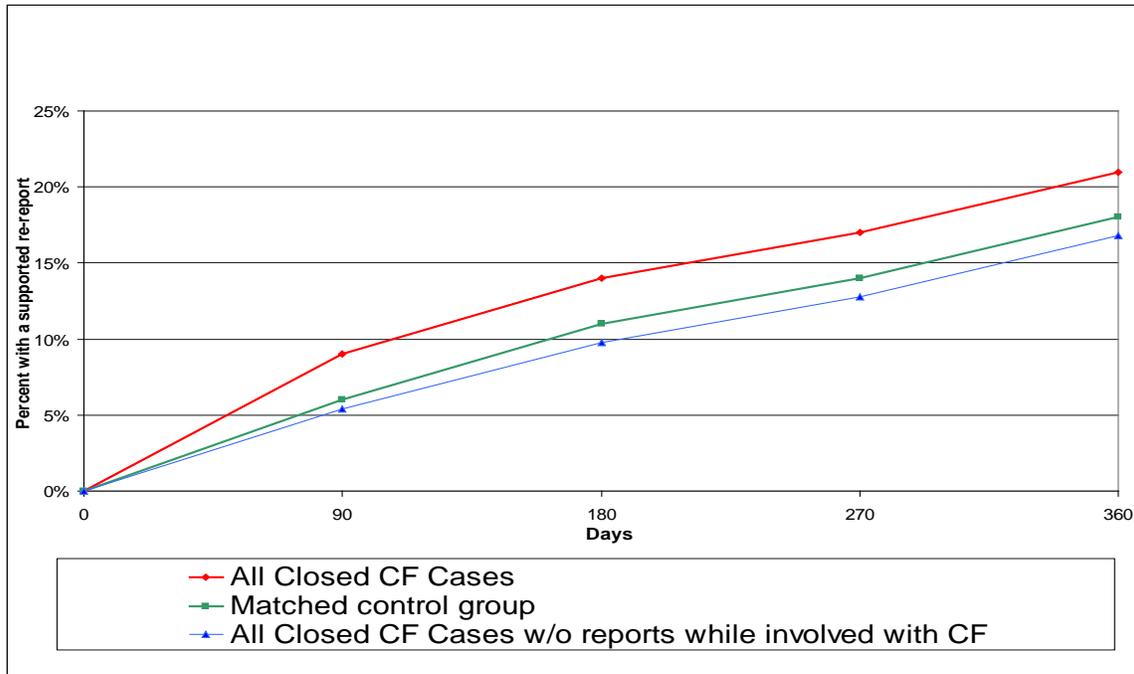
Figure 1. Rates of supported re-reports over a year's time among Connecting Family graduates compared to Matched Families.



Some participants in the Connecting Families program were re-reported while they were in the Connecting Families program. In order to examine the potential impact of this, Figure 2 illustrates the cumulated rates of supported re-reports over a year's time among all closed Connecting Families cases, then among the Connecting Families families who were not re-reported during their involvement with Connecting Families, and compares these two rates with those of the Matched control group. Over the one-year period, 21% of all of the Connecting Families group, regardless of whether or not their re-report occurred during their participation in Connecting Families, had a supported re-report, compared to 18% of the Matched Families. However, approximately one-fourth of the Connecting Families who had a supported re-report were reported while participating in Connecting Families. Thus, this difference in re-report rates may be due to families in the Connecting Families being more closely monitored than were the Matched Families. This possibility is illustrated by the bottom line in the graph which

represents estimated rates (15.8% at one year) of re-reports among all closed Connecting Families who were not re-reported during their participation in the Connecting Families program.

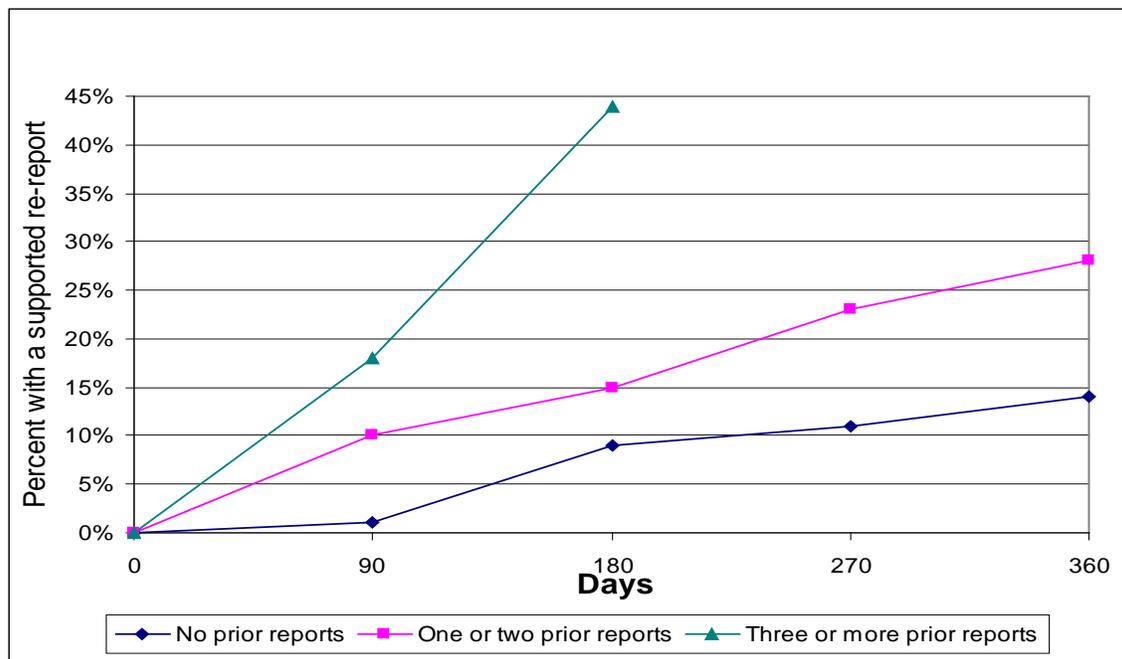
Figure 2. Rates of supported re-reports of all closed Connecting Families cases, Matched Families, and all closed Connecting Families without re-reports while involved with the Connecting Families program



One of the primary goals of the FON (and Connecting Families) program was to assist families with unsupported reports to develop resources that would help keep them from being re-reported in the future. Thus, previous history of reports to DSS was considered an important risk factor for future re-reports. This does, in fact, appear to be the case. The number of prior reports families have had, whether supported or unsupported, is significantly associated with future re-reports, with more prior reports predicting greater likelihood of future re-reports. Figure 3 below illustrates this graphically. In the figure, rates of supported re-reports are graphed among three groups

of families: (1) those with a history of no prior reports, (2) those with a history of only one or two prior reports, and (3) those with a history of three or more prior reports. The association between past report history and future re-reports is dramatically illustrated in the graph, with 14% of families with no prior reports having been re-reported in one year's time, and twice as many (28%) of families with one or two prior reports were re-reported in one year's time. There were too few families with three or more prior reports to report to describe a full year's worth of re-reports, especially because nearly half (44%) of these families had been re-reported within 6 months' time.

Figure 3. Rates of supported re-reports by prior report history among Connecting Families only.



Information about the CPP Families

To date, 14 families have been referred to the FON by the Child Protection Program (CPP). Families' demographic information and service utilization was provided in the previous report for these 14 families. New information has been received that

allows the identification of the engagement status of the majority of the CPP families to be identified.

Of the 14 CPP referrals to the FON, 5 have been noted as having completed the program (and thus graduated), while another 3 have data from both their initial and their final transition interviews but their closure status is not yet indicated. Since data is available from both interviews, it might be assumed that these families also graduated successfully from the program; thus it appears that 8 of the 14 CPP referrals have graduated successfully. This is a 57.1% graduation rate of all referrals.

It also appears that 2 families refused services, 1 moved out of the area, 2 others were unable to be contacted, and 1 was unavailable for services because the caregiver had returned either to work or to school. Thus, it would appear that 6 of the 14 referrals never agreed to participate in the FON; which indicates that 43% either refused at the outset or did not engage to due to external circumstances. Regardless, the numbers are too small to make definitive statements about refusal of services, engagement, and graduation.

This analysis must be viewed in a context that differs from the one pertaining to the families referred by DSS. Families who are referred by CPP are experiencing significantly different situations than those referred by DSS. First, many of the children seen by CPP are not for allegations made against their primary caregiver, as is the case with the DSS referred families. Second, CPP children are often seen for medical assessment, as the likelihood that the abuse occurred is high. However, in many cases these children/families do not meet the DSS threshold for an investigation to be conducted, generally due to the alleged abuser being someone outside of the family.

Therefore, these families are seeking services and are eager to accept and participate in FON services.

Third, for these families, CPP is generally the first contact that they have had with a service provider; they are often in crisis and anxious to receive support. Conversely, the DSS families have just undergone an intensive 10-day investigation in which they have had multiple contacts with a “provider” as well as having had 10 days for the “crisis” that initiated the intervention to have subsided. Thus, the family may potentially be less amenable to services at that time.

FON-Specific Analysis

The “value-added” of the FON has been indicated more anecdotally than statistically. The role of the Family Outreach Network Coordinator has primarily focused on facilitating referrals from DSS to the Connecting Families program, promoting the use of the FON by the DSS Investigators and the Child Protection Program; trouble-shooting and assisting in problem solving when unusual situations regarding the appropriateness of referrals arises and participating as part of the Connecting Families team to ensure that information and resources are available to assist the Connecting Families program staff.

The “network” is made up of the member agencies that participate in the Family Outreach Network committee. The committee’s role is to assist in the “systems issues” that may arise and to identify or develop strategies to address the issues--e.g. access to resources, language barriers, as well as to review and discuss the effectiveness of the overall initiative.

The Connecting Families program staff have repeatedly stated that one of the primary benefits in having the FON Coordinator is that all referrals are presented to the CF team as part of a referral and Family Advocate assignment process that the Worcester Connecting Families program has implemented. Because of this coordinated team process, referrals are presented once a week. While it potentially may add some time to the referral process as opposed to a direct referral from the DSS Investigator to the CF program, the CF staff value the opportunity to have the information presented in an organized summary, allowing the team to discuss the case and make the most appropriate case assignment.

An analysis of the length of time it takes from the initial 51-A allegation to the date of first contact by CF staff was provided in the evaluation report submitted as part of Implementation Year 3 year-end report. Measuring the effectiveness of the coordinated process is difficult as there is no other process with which to compare. However, it does appear that virtually all cases which an investigator anticipates not supporting, consent for referral to FON is obtained prior to the official decision to close a case. In this way, the referral can be made immediately upon the final decision by DSS not to support an allegation. It is likely that the investigators' foresight and planning to expedite a referral to FON is a result of the work being done by the FON Coordinator to ensure that investigators consistently offer the program.

In addition, the FON Coordinator regularly engages the DSS Investigators in a number of informal opportunities to discuss the FON and its value to families as a way to ensure that all appropriate referrals are made. Again, it is difficult to measure its effectiveness as it cannot be compared to another site and the number of referrals that are

made by DSS is driven by the number of reports that are unsupported in a given week, as well as whether or not the family meets the criteria for referral.

A new system to monitor the total number of potentially eligible referrals as compared to the actual number of referrals and the reasons for those not referred, was implemented in December 2006 as a way at least to identify whether all eligible referrals are being made in Worcester. Again, there is not another site with which to compare. Moreover, since the statewide pilot has ended and the other five CF sites are no longer accepting referrals, future comparisons cannot be made. However, the value in and of itself is that because of the FON Coordinator and the active participation by both DSS Area Program Managers in FON, this information can be tracked. At a minimum, the FON can ensure that all appropriate families in Worcester are offered the program.

The FON Coordinator also provides the CF staff more direct access to additional information needed from DSS after the referral has been made. Without the FON Coordinator, who is authorized to share client information between all FON participating members, CF staff would be required to obtain additional consent by the families, potentially slowing down their access to pertinent information to assist the family.

Another activity was implemented in which the FON Coordinator makes an initial contact with families who are to be referred but whose referral will not be made for a few days due to the once-a-week referral process. In many cases, the family is Spanish-speaking and the FON Coordinator (who is not bilingual) does not have the ability to contact the family. This is another area in which the FON is helpful. Spanish-speaking members of the committee are able to make the initial calls to preliminarily engage the families until their referral can be made.

Finally, as MSPCC considers changes to its Connecting Families program (refer to the section regarding changes in the accompanying mid-year report), the FON has been instrumental in thinking through some of the options which MSPCC might consider to better serve families in Worcester.

Conclusions

The Connecting Families program has proven successful at linking families with complex needs to vital services and supports. Of the caregivers identified as needing mental health services, 97% in Worcester (94% statewide) were referred to such services, and these services were refused by only 30% of those referred in Worcester (36% statewide). Similarly, of the families with a child identified as needing mental health services, 98% in Worcester (93% statewide) were referred to such services, and these services were refused by only 18% of the families referred in Worcester (17% statewide). Of those families identified as needing child care and support, 99% in Worcester (97% statewide) were referred to an appropriate program (e.g., daycare, Early Intervention, etc.). At case closure, 64% of children in Worcester (48% statewide) under the age of 3 years were connected to Early Intervention, as opposed to only 34% of Worcester referrals (34% statewide) who were connected to Early Intervention at entry into the FON (or the statewide Connecting Families) program.

The FON (and Connecting Families) program appears to have been most successful at connecting families to economic support. All (100%) of the families needing such support in Worcester and statewide were referred to the appropriate assistance program (e.g., TANF, energy assistance, food stamps, SSI, Section 8 housing,

WIC, etc.). At case closure, 80% of the families in Worcester referred to such economic assistance programs (84% of the families statewide) had received one or more of the services.

The most important lesson learned from the evaluation over the past three years is that the safety net for families needs to be expanded. Families whose 51-A report is unsupported still have significant needs and do benefit from programs that increase their access to services. Moreover, reaching families prior to their initial involvement with the Department would prove more effective as part of an early intervention strategy.

Some suggestions for increasing engagement of families referred to the FON and Connecting Families project can be made at this point. For example, to attempt to determine the special barriers to engagement among the referred families who avoid contact with representatives of MSPCC after referral to Connecting Families by DSS, in-person or telephone interviews or focus groups might be attempted with some of the families who have successfully avoided all contact with representatives of Connecting Families, conducted by evaluators that are not associated with DSS in any way, in order to remove that possible barrier to making the initial contact with these families. Perhaps successful contacts with these families might be made by parents who have already successfully completed their association with the Connecting Families program. It might also help if trusted community leaders, such as local religious leaders, could somehow explain the Connecting Families project to the local community at large and encourage families in the community to welcome visits from the Connecting Families representatives. Perhaps devising a means of dissociating the Connecting Families

project from both MSPCC and DSS would help remove any suggestion of any possible hint of stigma from association with the program in the first place.

Focus groups with families who currently are, or previously were, engaged with the Connecting Families project also might provide significant insight into the perceived barriers to and facilitators of successful engagement in the project. One thing that appears to have emerged from the evaluation of the project is that longer duration of association with Connecting Families is associated with successful completion of families' engagement. It also appears that being from a minority ethnicity or race is a barrier to successful engagement. Focus groups with specific families of specific minority races might elicit useful information regarding the particular barriers to and facilitators of successful engagement in the project among families of each minority race. There may be particular cultural and/or linguist barriers that have not yet been considered when attempting to contact these families, such as language barriers and possibly immigration status.

It also appears that outcomes, such as whether or not a family is rereported to DSS and whether or not that rereport is supported, are in part associated with at least three factors: the number of prior contacts a family has had with DSS, whether or not their present referral was for abuse or for neglect, and the age of the oldest adult in the household. The number of prior contacts a family has already had with DSS, regardless of whether or not those referrals were supported, is certainly an indication of the likely resistance of the family to change and might be taken as an indication that the family is going to require special techniques be used for recruitment and retention in the program. It may even require that some families continue to have some sort of contact with DSS as

part of the “terms” of DSS’s nonsupport of the family’s current 51-A, even though this might require changes in DSS policy. A revised Connecting Families program might want to try to develop methods of working with families according to whether or not their current referral was for abuse or for neglect. These families might manifest problematic behaviors that are qualitatively different from each other and that have ramifications for the whole process of contacting and successfully engaging families in the program.

The fact that households with older adults in them appear to make more successful use of the opportunities afforded them by participation in the Connecting Families program may have multiple implications for any future revision and refinement of the Connecting Families program. Families headed by young, inexperienced single mothers are likely to require particular attention in any such program. Beyond their age and inexperience, however, one thing these parents might lack is a social support system. Some families with older adults may be families that include grandparents, suggesting that younger parents in these families have access to more experienced adults for advice. Perhaps one of the resources younger heads of household might benefit from would be access to more experienced parents or a social network that would allow these parents occasional respite from childcare and provide them with emotional support, as well.

The unexpectedly high incidence of mental illness among both adults and children in families referred to Connecting Families is already causing MSPCC to rethink the program in this regard. It appears that the program has been more successful at getting families connected with mental health services for their children than it has had getting the families connected to mental health services for those adults who might benefit from such services. Since adult mental illness can have an untoward effect on the mental and

emotional health of their children, special efforts might be required to encourage adults with mental health needs to take advantage of the available resources. The possibility of dual mental health and substance use needs might also be considered among these adults.

Any future evaluation of a program similar to the Connecting Families also might consider changes to the evaluation tools. There is reason to question the ability of a program such as Connecting Families to change parenting practices and attitudes to any measurable degree. Connecting Families was not devised to have contacts with families for more than 3-6 months. The types of interactions families have with the Connecting Families program are designed more to assist families in assessing their family resource needs and making referrals to programs that will allow these needs to be met. In this regard it might be expected that an assessment of changes in family resources over the course of their association with Connecting Families would be more likely to demonstrate a significant impact of the program on these family's lives than would measurement tools designed to assess abusive and neglectful parenting practices. In fact, the Connecting Families project originally included the Family Resources Scale among its assessment tools, and earlier analyses of the program indicated that the program did demonstrate significant increases in family resources among those families who successfully engaged in the program. This measure was later superseded by measures such as the AAPI and the CAPI. There might be other opportunities to better match assessments with program aims, as well.

MSPCC might reconsider the point at which families are referred to a program such as Connecting Families. If some means could be devised of identifying families at risk *prior* to their involvement in DSS, this might allow intervention at an earlier point in

the dysfunctioning of the family. This might in turn have ramifications for the whole process of contacting and engaging such at risk families successfully. Without a connection with DSS or the juvenile justice system, much of the concern about possible stigma associated with a program such as Connecting Families might be obviated. perhaps decreasing much of the difficulties associated with contacting at risk families and getting their agreement to participate in such a program. This, again, might necessitate that MSPCC somehow put some distance between their organization and a program such as Connecting Families, as well.

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Shaken Baby Syndrome Prevention

Introduction

Shaken baby syndrome prevention education is provided to parents of newborns in the six Central Massachusetts birthing hospitals. Five of the hospitals have fully implemented the formal training program. The analysis of the SBS prevention education initiative is based on the evaluation of these five hospitals (Heywood Hospital, Gardner; Harrington Hospital, Southbridge; Milford Regional Medical Center; St. Vincent Hospital, Worcester; and UMass Memorial Medical Center, Worcester). The sixth hospital, HealthAlliance in Leominster has recently begun the process to implement the formal program. For the past few years, HealthAlliance was offering a less formal program which is not included in the evaluation protocols.

The evaluation process began in August 2003 when Heywood hospital implemented the first program. The evaluation process has remained the same over the life of the initiative. As more hospitals became fully operational, measurement tools were changed and revised. The effects of the changes are noted in the sections to which they pertain.

Evaluation Method

Methods for evaluation of the nurse training. Evaluation of the shaken baby syndrome prevention initiative involves measuring the knowledge gained by nurses trained to provide SBS prevention education to parents and caregivers of newborn babies. The knowledge survey is intended to be answered by new nurse trainees both immediately prior to and immediately after their training. If their answers show a

significant increase in knowledge from pre- to post-training, this would provide evidence that the training is effective. The knowledge survey was instituted at the time that the nurses at St. Vincent Hospital were being trained (Fall 2005). Another tool, an evaluation questionnaire, is used to assess their perspective regarding the quality of the training they received to prepare them for educating parents/caregivers.

Method for evaluation of the parent training. Evaluation of the SBS prevention training provided by the nurses and its impact upon parents is accomplished by conducting follow-up telephone surveys of parents approximately three months after they receive their training. The follow-up survey questions concern what the parents remember about their SBS training, how useful they have found it to be, and whether or not they have shared what they learned with other possible caretakers for their baby.

Evaluating Nurse Training

Results of the SBS Prevention Nurse Training Evaluation Questionnaire. Since UMass Memorial Medical Center has implemented the shaken baby syndrome prevention training, an additional 105 nurses received the training in 2006 in addition to the 130 nurses trained in 2005 when the knowledge questionnaire was instituted. Not all nurses complete both the pre- and post- Knowledge Survey and the Evaluation Questionnaire. Table 2 below presents the responses to the Evaluation Questionnaire of the 150 nurses who received SBS trainings in 2005 and 2006 and responded to the Questionnaire.

As the table indicates, all of the nurses reported that they found their instructor to be knowledgeable and almost 100% of them thought the information was clearly presented. Overall, 99.3% of them found the training to be Very Good or Excellent.

Nearly 99% of the nurses indicated that the training met their expectation and nearly everyone agreed that the training effectively defined Shaken Baby Syndrome, comprehensively described the clinical presentation of the syndrome and clearly defined predisposing factors related to the incidence of SBS. Ninety-eight percent felt that the training provided comprehensive instruction in the protocols for teaching new parents to prevent shaken baby syndrome with 94% saying they had gained new knowledge from the training. This is an important finding. Generally, labor and delivery nurses would not necessarily be knowledgeable in shaken baby syndrome/child abuse, as it is a subspecialty. The increase in their knowledge, coupled with their feeling of preparedness to provide the education is critical in order for parents to receive effective training.

Nearly everyone agreed that they would recommend the training to other people, and they all agreed that they were likely to share what they had learned with other people who work with parents of children.

Table 2. Nurse Evaluations of Shaken Baby Syndrome Prevention Training.

	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
1. The presenter was knowledgeable.				8/150 (5.3%)	142/150 (94.7%)
2. The information was presented in a clear way.			1/149 (0.7%)	16/149 (10.7%)	142/149 (95.3%)
3. I gained new knowledge from this training		2/149 (1.3%)	7/149 (4.7%)	24/149 (16.1%)	116/149 (77.9%)
4. I am likely to share the information I learned with parents, colleagues and others.				22/150 (14.7%)	128/150 (85.3%)
5. I would recommend this training to other people who work with parents of young children.			1/150 (0.7%)	7/150 (4.7%)	142/150 (94.7%)
6. This training met my expectations.		1/150 (0.7%)	1/150 (0.7%)	19/150 (12.7%)	129/150 (86.0%)
7. Objective 1: The training effectively defined Shaken Baby Syndrome.			1/150 (0.7%)	10/150 (6.7%)	139/150 (92.7%)
8. Objective 2: The training comprehensively described the medical aspects of Shaken Baby Syndrome.				14/150 (9.3%)	136/150 (90.7%)
9. Objective 3: The training identified predisposing factors related to the incidence of Shaken Baby Syndrome.				14/149 (9.4%)	135/149 (90.6%)
10. Objective 4: The training provided comprehensive instructions for teaching new parents to prevent Shaken Baby Syndrome.			3/150 (2.0%)	16/150 (10.7%)	131/150 (87.3%)
	Poor	Fair	Good	Very Good	Excellent
11. What is your overall opinion of this training?			1/139 (0.7%)	16/139 (11.5%)	122/139 (87.8%)

Results of the Nurse SBS Knowledge Questionnaire. One hundred and forty-five nurses completed the Knowledge Questionnaire prior to their SBS training as well as after receiving their training. A comparison of the answers of these nurses to their SBS Knowledge Questionnaire prior to training and again after training indicates that they demonstrated a significant gain in knowledge.

Among the 148 nurses in total who completed *only* the test *prior* to their training, the percentage of correct answers ranged from 22.6% to 93.6% correct, with an average of 66.3% (\pm 14.5%) correct. On the other hand, among the 145 nurses in total who

completed *only* the test *after* their training, the percent of correct answers ranged from 38.7% correct to 100%, which was attained by 13 of the 145 nurses. The average proportion of correct answers on the post-training test was 82.1% (± 14.7).

More importantly, among the 145 nurses who answered *both* pre- and post-training tests, their average score rose from 66.9% ($\pm 14.6\%$) correct to 82.1% ($\pm 14.7\%$) correct, which was a statistically significant increase in their knowledge scores ($t_{(144)} = 13.79, p < .0005$), demonstrating that the training the nurses receive regarding shaken baby syndrome is quite effective.

Evaluating Parent Training

Shaken baby syndrome prevention education training was offered to parents of newborns at Heywood Hospital beginning in August of 2003. Harrington Hospital began parent trainings in December of that year. Milford Regional Medical Center began trainings one year later in December of 2004. St. Vincent Hospital began offering training in November of 2005, with UMass Memorial Medical Center beginning in December, 2006.

As indicated in Table 3 below, since the program began in 2003, 4,847 babies born in the five hospitals offering SBS prevention education through December 2006 have had at least one parent/caregiver trained. A second parent or caregiver was also trained for 1,563 of these babies. This represents 66% of all of the babies born during this time.

Table 3. SBS trainings of parents of newborn babies in five Central Massachusetts hospitals between December, 2003, and December, 2006.

Hospital	Births	Trainings (% births)	Received Brochure (% Forms Returned)	Viewed Video	Had Nurse Lecture	Had Mother's Signature	Had A Second Signature	Agreed to Follow-up Call
Harrington 12/03 – 12/06	1317	1115 (84.7%)	1085 (97.3%)	1055	1078	1104	361	378
Heywood 7/03 – 6/06†	1696	838 (49.4%)	815 (97.3%)	792	810	816	367	481
Milford 12/04 – 12/06	1816	1028 (56.6%)	896 (87.2%)	800	817	864	408	443
St. Vincent 11/05 – 12/06	2130	1,741 (79.9%)	769** (44.2%)	576**	767**	*	89	222**
UMass Memorial 12/06	371	125 (33.7%)	124 (99.2%)	19	125	116	36	39
Total	7,330	4,847	3,689	3,242	3,597	2,900	1,563	1,261

† Data incomplete for 7/06-12/06

** Data incomplete for 11/05-6/06

* St Vincent Hospital uses a consent form which combines authorization for release of information, for the purposes of call-back surveys as well as relating to receipt of education. Therefore, citing HIPAA regulations, the hospital does not provide any “mother’s signatures” for anyone who does not consent to a call back.

Follow-up telephone survey evaluation of parent SBS prevention training. The telephone survey of parents was instituted in the pilot year and the call-back process has continued throughout the life of the project. The surveys that were conducted over the first couple of years allowed several difficulties with the administration of the survey to be identified. Given the challenges, an opportunity was taken to rethink and revise the questions in order to increase their relevance in meeting the evaluation objectives. The possible responses were also simplified and individuals who were designated to make the calls received training on the revised call-back script. With each change in the

measurement tool, the data from previous analyses could no longer remain as part of the evaluation sample and an entirely new sample of parents was used.

A final change was made mid-year during Implementation Year 3 (2005-2006) based on discussions with the Department of Public Health staff responsible for data and surveillance. Given the extent of the Department's involvement in shaken baby syndrome prevention in anticipation of the passage of the SBS prevention bill, the DPH staff made suggestions to further improve the call back survey and the nurses' knowledge questionnaire. Although most of the questions originally asked have been retained, some have been rewritten and others have been replaced with clearer alternatives. See Attachment III for a copy of the telephone survey, scripted for the SBS interviewer.

In order to maintain the integrity of the call-back data, the results reported in this analysis is of the 217 telephone surveys of caregivers completed after the latest changes in the script which were implemented in July, 2006.

Parent/caregiver responses are summarized in Table 4 below. Of the 217 who were called, 208 (95.9%) indicated that they recalled a nurse talking to them about infant crying, how to calm their baby, and the dangers of shaking a baby.

There were 193 parents of the total 217 (88.9%) who remembered viewing the video. Nearly everyone (191 of 193 or 99.0%) who viewed the video found it of some or a lot of interest.

There were 201 parents of the total 217 (92.6%) who recalled receiving the brochure. Of these 201, 179 (89.0%) read the brochure, and 175 (97.8%) of those who read it found it useful.

As the data demonstrates, there are multiple components to the education program. While the protocol is to provide all three components, circumstances may preclude it (length of time in the hospital; physical and emotional state of the mother after delivery, etc). However, having differing methods of conveying the information increases the likelihood that the pertinent information is provided. The opportunity to provide the information multiple times allows for the reinforcement of what has already been provided.

Despite the challenges in presenting the various components of the education program given the circumstances present in a hospital setting and the limited time available, the data suggests that the education makes a lasting impression. Even when examining each component individually, for example, comparing the responses of only those who recall a particular method – or when comparing the individual component to the total number of parents/caregiver who were called – the data indicates a high recall of the program and the value of the various components.

The overall effectiveness of the shaken baby syndrome prevention initiative is contingent upon the information being shared with anyone who will be responsible for or left alone with the child. Therefore, the extent to which the trained parent/caregiver shares the information is critical. Of the 179 parents who read the brochure, 162 (90.5%) reported that they shared the information in the brochure with others. Clearly, an overwhelming number of parents/caregivers find the information pertinent and relevant since they share it at such a high rate.

Determining the exact relationship between the child and the person with whom the information has been shared poses some challenges. For example, sharing the

information with an individual who is not considered a “baby-sitter,” such as the mother’s sister, or her brother-in-law, would not be reported in the “shared with baby-sitter category,” yet either of them could very well be left alone with the baby. While the information presented in Table 4 does break out the responses into specific categories, it is important to note that infants are most likely left with either family members or individuals considered to be the child’s “babysitter/caretaker.” Therefore, the surveys indicate that when parents share the information (93.2% of the time), they share it with family members and babysitters/caregivers 75.3% of the time; 17.9% of the time with other non-family members. When one considers the extent to which parents share the information and the extent to which the nurses indicated that they would also share the information with others who work with children, the potential for wide-spread dissemination of the information increases exponentially.

In addition, another challenge in evaluating the extent to which parents/caregivers share the information is that it is based on only those who have reported reading the brochure (179) and then sharing it (162). Based on the overall data and its positive findings, it would seem highly probable that parents who did not read the brochure, but did view the video and/or had a discussion with the nurse shared the information with others as well. Thus, the total number of people who are educated increases.

Two-hundred-and-five parents responded when asked how often their baby had cried or fussed since they returned home from the hospital. Of those 205 parents, 95 (46.3%) indicated they had had experiences with their baby crying or fussing some times or often since returning. Only 8 (3.7%) reported their baby never cried or fussed. This is also an interesting finding in that the statewide shaken baby syndrome analysis conducted

by the Department of Social Services' Child Welfare Institute at University of Massachusetts Amherst, found that of the babies who were known to have been shaken, less than half (40.9%) had been identified as having special needs, particularly fussy or having cried a lot. This clearly demonstrates all infants' vulnerability to being shaken, regardless of whether or not they are considered difficult. When asked how they handled their crying or fussing baby, 195 (95.1%) said they hold, rock, feed or bathe the child. Another 41 (20.0%) asked for assistance from someone else, and nearly an equal number (45 or 22.0%) said they just walked away. Other responses were reported by 31 (15.1%) of the parents. These varied from such things as burping the baby, feeding or changing it, and involving the baby in some activity, as well as singing to the baby. One parent reported getting help for postpartum depression.

Table 4. Responses of parents to follow-up telephone survey regarding their SBS prevention training.

	n	Proportions	
		Total Called (217)	Specific to Questions
Recalled Nurse Discussing Calming and Dangers of Shaking a Baby	208	95.9%	
Remembered Viewing Video	193	88.9%	193 Rated the Video
Found Video of Interest Some or A Lot	191	88.0%	99.0%
Remembered Receiving the Brochure	201	92.6%	201 Remembered Brochure
Read the Brochure	179	82.5%	89.0%
			179 Read Brochure
Found the Brochure Somewhat or Very Useful	175	80.6%	97.8%
Called Help Line	4	1.8%	2.2%
Shared Brochure Information with Others	162	74.6%	90.5%
			162 Shared Information
Shared Information with Family Members	116	53.5%	71.6%
Shared Information with Babysitter/Caretaker	6	2.8%	3.7%
Shared Information with Other Non-family	29	13.4%	17.9%
How Often Has Baby Cried or Fussed Since Returning Home?			205 Answered About Fussing Baby
Baby Fussed Often	30	13.8%	14.6%
Baby Fussed Sometimes	65	30.0%	31.7%
Baby Fussed Rarely	105	48.4%	51.2%
Baby Never Fussed or Cried	8	3.7%	3.9%
Baby Cried or Fussed Sometimes or Often	95	43.8%	46.3%
How Handled Crying or Fussy Baby:			
By Holding, Rocking, Bathing after Feeding	195	89.9%	95.1%
By Walking Away	45	20.7%	22.0%
By Asking for Assistance	41	18.9%	20.0%
By Doing Something Else	31	14.3%	15.1%
How Often Do Efforts to Calm Baby Help			
Most of the Time	190	87.6%	92.7%
Sometimes	14	6.5%	6.8%
Rarely	1	0.5%	0.5%
How Helpful Was the SBS Information for Caring for Your Baby?			213 Answered This Question
Very Helpful	146	67.3%	68.5%
Somewhat Helpful	66	30.4%	31.0%
Not At All Helpful	1	0.5%	0.5%
SBS Information was Somewhat or Very Helpful	212	97.7%	

Conclusions

The quality of the nurses' training as demonstrated by their knowledge gained after being trained as well as their self-report on being prepared to educate parents indicates that the curriculum is effective and achieves its goals.

The effectiveness of the SBS prevention education program for parents has also been demonstrated. The results indicate that the program has a positive impact on parents' understanding of the effects of shaken baby syndrome as well as on instructing them on ways to care for and calm their crying/fussy baby. The vast majority of the respondents are able to recall their conversation with a nurse about the dangers of shaking a baby and a significant percentage report that the techniques to calm a crying/fussy baby have worked most of the time (refer to Table 4). It is quite reasonable to infer that the education program has been effective in increasing their understanding of SBS, the importance of preventing it and ways in which they can take action to prevent it.

In addition, 93.2% of the parent/caregivers share the information--with 75.3% sharing the information with other family members and babysitters/caregivers. Clearly, one of the primary objectives of the training--to share information with as many individuals as possible who may be asked to care for the baby--is being achieved.

Moreover, as more is learned about the events that precipitate an incident of SBS, the more the research indicates that even the usual and expected newborn behaviors can lead to an act of SBS. SBS prevention education should focus less on the "awareness message" regarding the dangers of shaking a baby, and focus more on ways to potentially change parental behavior when confronted by difficult situations. By minimizing the level of frustration that a parent/caregiver experiences when caring for an infant such as

by providing suggestions about ways to better manage the situation, the more likely the education will be in preventing incidents of SBS. Incorporating techniques for infant soothing is an area that warrants further exploration.

With respect to the number of parents trained in comparison to the number of births per hospital, efforts to continue to increase the numbers of parents educated will remain a priority. As the data indicate, the rates vary significantly by hospital. Efforts are already underway to work with hospitals to increase the number of parents trained. Challenges have been identified and are being addressed with the hospitals. One of the strategies was to host a breakfast event in which the hospitals, other community health providers and the Department of Public Health could come together and discuss the issues as part of a plan to improve upon the program in Central Massachusetts and also to inform efforts to replicate it across the state. This event was held on March 28, 2007.