

Partners in Community Outreach - Healthy Lifestyles Campaign
Evaluation of Campaign Activity
For the Six-Month Period - July through December 2009

April, 2010

Background and Introduction:

Partners in Community Outreach is a statewide coalition that promotes and supports healthy families through in-home family education programs. Three nationally recognized programs are represented within the organization including:

- Healthy Families America,
- Parents as Teachers, and the
- Maternal Infant Health Outreach Worker (MIHOW) program.

All three of these programmatic approaches rely on in-home family education services to support and strengthen families with young children and all have been extensively evaluated and shown to be effective.

Partners in Community Outreach initiated the “Healthy Lifestyles Campaign” in May of 2009 through fourteen programs serving families in West Virginia. Support for the program was provided by the Claude Worthington Benedum Foundation.

During the months of January through April of 2009, a number of educational modules were developed for use by home visitors that focus on healthy lifestyle issues including:

- Early childhood development,
- Nutrition,
- Physical Activity,
- Obesity,
- Smoking
- Alcohol Abuse,
- Other Drug Abuse, and
- Healthy Pregnancy.

Home visitors working for the fourteen participating programs were trained in how to use campaign materials in April of 2009 and the Healthy Lifestyles Campaign was first implemented within these programs in May of 2009.

In order to assure that the campaign was designed in a way that would be likely to produce the desired results; a logic model was developed to guide the implementation of the campaign (see initial evaluation report dated September, 2009 for more information).

Evaluation Methodology:

Evaluation of the Healthy Lifestyles Campaign addresses three areas of interest:

1. Prevalence of healthy lifestyle issues in families served,
2. Process - inputs and activities provided to the family through the campaign, and
3. Outcomes - changes in behaviors and attitudes about each lifestyle issue within the families exposed to the campaign materials related to that particular issue.

Guided by the logic model, a preliminary evaluation of initial implementation efforts during May and June of 2009 was previously conducted. Analysis of the initial data collected during the summer months of 2009 identified a number of issues related to the reliability of the data and the design of the data collection tool which called into question the validity of the outcomes reported. A number of changes were made in the data collection tool during the months of November and December in order to improve the reliability of the data reported by home visitors. Issues related to data entry were also reviewed with each of the participating programs to improve the quality of the outcomes data reported and reliability of data entry by home visitors. Additional training was also provided related to how to record data about the families served using the on-line tool. With the changes in the data collection tool and additional training provided, this report, which covers the period July 1, 2009 through December 31, 2009, is considered to be a much more reliable measure of the results being obtained through the Healthy Lifestyles Campaign over the first complete six-month period of the campaign.

Data is collected through an on-line Internet based tool. The data collection tool is designed to capture data about activity and observed results over six-month periods of time – July through December, 2009; January through June, 2010; etc. This evaluation report addresses the prevalence of lifestyle issues addressed through the campaign, the level of activity (process measures), and the outcomes observed by the home visitors during the evaluation period of July through December of 2009.

Home visitors entered information into an on-line database about the types of lifestyle issues present within each of the families they reported on, the type and frequency of information and education provided to each of these families, and the changes in attitudes and lifestyle behaviors observed by the home visitor during the reporting period. Home visitors also reported additional information about families where there was a pregnancy during the reporting period so that pregnancy related outcome data could be captured and analyzed.

Summary of Families Served – July through December 2009:

Data was reported on a total of 449 families by twelve in-home family education programs. One Healthy Families America (HFA) program, three Maternal Infant Health Outreach Worker programs (MIHOW), and eight Parents as Teachers programs (PAT) reported data on families participating in the Healthy Lifestyles Campaign during the

period of July through December of 2009. A total of 557 families were served during the reporting period by the twelve programs reporting data; thus, 80.6% of all families served by these programs are represented in the evaluative data.

One or more of these families resided in twenty-one counties of West Virginia; however, five of these twenty-one counties were represented by less than 2% of the total families reported on; thus, almost all (98.2%) of the families represented within the data live in sixteen counties of West Virginia. These families live in counties located in the southern and northern parts of the state – they are, therefore, not necessarily representative of families residing in the central or eastern parts of West Virginia who may be served by an in-home family education program.

Lifestyle Issues Present Within Families:

Three of the lifestyle issues addressed through the campaign are routinely addressed by all three types of in-home family education programs. These issues are

- Enhancing child development,
- Improving nutrition in the daily diet, and
- Increasing physical activity.

All families served by the in-home family education programs can benefit from information, education, and activities related to these three issues and these issues were addressed with nearly all families reported on during the evaluation period.

Other lifestyle issues known to contribute to poor health addressed by the campaign include:

- Significantly overweight family members (adult and or childhood obesity),
- Smoking,
- Alcohol abuse, and
- Other Drug abuse.

The most frequently occurring of the unhealthy lifestyle issues in families was tobacco use. Smoking was reported as an issue in 32.5% of the families reported on. Obesity was also reported as an issue in many families. 22.4% of the families reported on had one or more family members who, in the opinion of the home visitor, were significantly overweight. Abuse of alcohol or other drugs was noted in families much less frequently. Alcohol abuse was identified in only 3.7% of the families and other drug abuse was identified in 3.5% of the families represented in the data.

Pregnancy and Lifestyle Issues:

When a family member is pregnant, unhealthy lifestyle issues are particularly problematic since obesity, smoking, alcohol use, and/or other drug use by the pregnant woman or exposure to second-hand smoke and/or stress in the household can have a negative effect of pregnancy outcomes.

There was a pregnancy within 20.9% of all families represented in the data. This reflects a total of 91 pregnant women; however, data describing lifestyle issues was reported for only 89 of these pregnancies. Home visitors reported that 86.5% of the pregnant women abstained from alcohol use during pregnancy and 88.8% did not use any drugs for non-medical purposes. Home visitors were not confident in assessing whether alcohol or other drugs were used by pregnant women in some cases (5 cases for alcohol use and 8 cases for drug use). Exposure to tobacco smoke during pregnancy appears to be a much more significant lifestyle issue among these pregnant women. Home visitors reported 49.4% of the pregnant women they served during the reporting period (July-December, 2009) smoked or may have smoked during their pregnancy and 59.6% were exposed to second-hand smoke or it was unknown whether they were exposed.

More than half of the pregnancies (56.0% of the families representing 51 women) resulted in a live birth during the reporting period. Four (8.0%) of these births were to low birth weight babies and two (4.0%) of the births were premature (prior to 36 wks.). Two of the pregnancies resulted in miscarriages.

Evaluation Findings - July through December 2009:

Findings for All Families Where Data Was Reported

Process Measures:

Four distinct types of process measures were collected. These measures define how well the Healthy Lifestyles Campaign was implemented during the reporting period. These four indicators describe the type and frequency of healthy lifestyle information and activity delivered to families by home visitors. Two types of strategies were carried out to address lifestyle issues:

- (1) Individual face-to-face contacts with one or more family members during home visits to provide information and education related to a specific lifestyle issue, and
- (2) Group education and activities outside the home designed to reinforce healthy lifestyle messages and support families to change behaviors.

The initial presentation of information is provided to one or more family members through educational modules developed for each of the healthy lifestyle issues addressed through the campaign. These modules provide materials and suggestions for how best to present the information to the family and also provide information about why the issue is important to the health and well-being of family members.

The process indicators monitored include:

- Initial presentation of information and educational materials to family members related to specific healthy lifestyle issues.
- Frequency of providing follow-up information related to specific issues.

- Number and percentage of families with opportunity to attend one or more activities outside the home.
- Number and percentage of families participating in group activities outside the home.

Process Indicators Related to Child Development, Good Nutrition, and Physical Exercise:

Healthy lifestyles information and education related to child development, nutrition, and exercise is beneficial to all families. These are the issues most frequently addressed by home visitors. Information and education was presented most frequently in these three areas.

Home visitors provided initial information and education to families about child development, good nutrition, or physical activity a total of 1,174 times.

Table 1 summarizes the number of families and percent of total families represented in the reported data who received information and education about child development, nutrition, and physical exercise.

Table 1

<i><u>Information & Education Provided by Home Visitor</u></i>	<i><u>% Families</u></i>	<i><u>Total Families</u></i>
<i>Enhancing child development (children’s book suggestions, limiting screen time, etc.)</i>	88.6%	382
<i>Good nutrition (child nutrition, worries about nutrition, eating out, nutrition during pregnancy, etc.)</i>	97.0%	418
<i>Physical activity (physical activity with infants & toddlers, general physical activity, activity during pregnancy, etc.)</i>	86.8%	374

Nearly all families represented in the reported data have received information and education about all three of these basic lifestyle issues important to all families.

Follow-up information was also provided by the home visitor after presentation of the information and education materials about each healthy lifestyle issue. These follow-up interventions might involve a discussion with the parent about the specific issue or an activity with the parent and/or child related to the issue.

One to five additional interventions were generally provided to families during the six-month period. At least one follow-up session was provided during the reporting period to nearly all families who had been given the initial information and education. 380 families received follow-up contacts related to child development, 413 received follow-up contacts related to good nutrition, and 370 received contacts related to physical activity. Some families received more than five episodes of follow-up education or activity

related to these issues during the period addressed by the evaluation; however, the vast majority received 1 to 5 follow-up sessions. Only about 6% to 8% of families received more than five follow-up sessions during the six-month reporting period related to any single issue and none received more than fifteen such sessions.

Home visitors provided some type of follow-up information or activity in areas of child development, nutrition, and physical activity to 99% of all families reported on.

See Table 2 for a summary of the number and percent of families receiving follow-up contacts.

Table 2

<u>Families Receiving Follow-up Contacts</u>	<u>% Families</u>	<u>Total Families</u>
Enhancing child development (children's book suggestions, limiting screen time, etc.)	99.5%	380
Good nutrition (child nutrition, worries about nutrition, eating out, nutrition during pregnancy, etc.)	98.8%	413
Physical activity (physical activity with infants & toddlers, general physical activity, activity during pregnancy, etc.)	98.9%	370

Note: Families receiving more than 10 follow-up contacts not shown in table.

The opportunity to engage in activities outside the home with other parents is the third process indicator used to evaluate the Healthy Lifestyles Campaign. Collectively, the in-home family education programs sponsored out-of-home activities that were available to a majority of the families reported on. Out-of-home activities related to child development were made available to 67.5% of families, activities that reinforce good nutrition were made available to 63.5% of families, and activities that encourage physical activity were available to 57.8% of the families. The number and percentage of families who had the opportunity to attend a program sponsored group activity during the six-month reporting period is summarized in Table 3 for the three healthy lifestyle issues commonly addressed with all families served.

Table 3

<u>Availability of Group Activities Outside the Home</u>	<u>% Families with Opportunity to Attend</u>	<u>Total Families With Opportunity to Attend Activity</u>
Enhancing child development (children's book suggestions, limiting screen time, etc.)	67.5%	287
Good nutrition (child nutrition, worries about nutrition, eating out, nutrition during pregnancy, etc.)	63.5%	275
Physical activity (physical activity with infants & toddlers, general physical activity, activity during pregnancy, etc.)	57.8%	247

The fourth process indicator used to assess the degree to which the Healthy Lifestyles Campaign was carried out in the manner intended is family participation in outside group activities. The number of activities attended by one or more members of each family reported on was captured for each of the issues addressed.

During the six-month reporting period, only about one-third of the total families reported on by the twelve programs participated in any activities outside the home; however, a majority of the families served by the programs that provided out-of-home activities participated.

Just over half of the families that had the opportunity to attend out of home activities actually attended one or more activities.

Participation in program sponsored activities outside the home is summarized in Table 4. The percentage of all families reported on that participated in at least one out-of-home activity is compared to the percentage of families that participated when opportunities were provided by the program.

Table 4

<u>Rate of Participation in One or More Out of Home Activity</u>	<u>Participation Rate Total Families</u>	<u>Participation Rate With Opportunity</u>
Enhancing child development (children's book suggestions, limiting screen time, etc.)	36.4%	53.7%
Good nutrition (child nutrition, worries about nutrition, eating out, nutrition during pregnancy, etc.)	36.4%	57.1%
Physical activity (physical activity with infants & toddlers, general physical activity, activity during pregnancy, etc.)	31.8%	54.3%

Nearly all of the families that participated in out-of-home activities attended one to five such activities during the six-month reporting period (July through December, 2009). Only 12 families attended more than five activities related to child development and only 3 families attended more than five activities designed to reinforce good nutrition and/or physical exercise.

Outcome Measures:

Three outcome measures were monitored to assess the effectiveness of the Healthy Lifestyles Campaign. These outcome measures define to what degree desired changes were observed in families by the home visitors during the reporting period. Outcome indicators are based on home visitor perception of: (1) changes in knowledge, (2) changes in attitudes and beliefs, and (3) changes in behavior related to each of the lifestyle issues addressed through the campaign. Home visitors were asked to offer their opinion about whether one or more family members increased their knowledge, changed their belief or attitude about the issue, and/or changed their behavior for each of the lifestyle issues addressed. When reporting whether or not family members had

changed, home visitors could respond “Yes, definitely”, “Maybe”, or “No, I don’t think so”.

A “Yes, definitely” opinion by the home visitor that one or more family members increased their knowledge, changed their belief or attitude, and/or changed their behavior about a particular lifestyle issue is the specific indicator used to assess the desired outcome. Only a “Yes, definitely” opinion by the home visitor is considered to be a reliable indicator of a desired change related to the particular issue within the family.

Since new families enter the in-home family education programs throughout the year, not all families served during a particular six-month period would necessarily have been presented with the initial information and education about any given issue. Further, not all of the lifestyle issues addressed through the campaign are present within all families. Therefore, **outcome measures are defined as the percentage of those families that have received the initial information and education about a particular lifestyle issue where desired change in knowledge, attitude/belief, and/or behavior associated with that issue is observed by the home visitor.**

Outcome Indicators Related to Child Development, Good Nutrition, and Physical Exercise:

The first outcome indicator is an opinion by the home visitor that one or more family members increased their level of knowledge about the issue during the six-month period of time. Increased knowledge about child development was noted in 74.6% of those families where this issue was addressed. Increased knowledge about good nutrition was observed by the home visitors a little less frequently (in 67.5% of families where the issue was addressed), and knowledge about the importance of physical activity was reported in 64.7% of all families where the issue was addressed.

Table 5 summarizes the percentage of total families served by the twelve programs where home visitors were confident that one or more of the family members had increased their knowledge about the importance of enhanced child development, good nutrition, and physical activity.

Table 5

<u>Increased Knowledge Within Family</u>	<u>% Families Increasing Knowledge</u>
Enhancing child development (children’s book suggestions, limiting screen time, etc.)	74.6%
Good nutrition (child nutrition, worries about nutrition, eating out, nutrition during pregnancy, etc.)	67.5%
Physical activity (physical activity with infants & toddlers, general physical activity, activity during pregnancy, etc.)	64.7%

The second outcome indicator is an opinion by the home visitor that one or more family members changed their attitude or beliefs about the particular issue. More than half of the families appear to have made some observable changes in their attitude and beliefs about all three of the issues most frequently addressed by home visitors. Home visitors were confident that there was a change in attitude or beliefs about enhancing child development within 62.0% of the families that received information and education about the issue. Changes in attitude or beliefs about the importance of good nutrition were noted in 54.8% of families, and desired changes in attitude or beliefs about the importance of physical exercise were observed by home visitors in 52.7% of the families.

A positive change in attitude and beliefs about the importance of child development, good nutrition, and physical activity was observed in more than half of the families.

Table 6 presents the percentage of those families who received initial information and education about the lifestyle issue where a change in attitude and beliefs about that particular issue was observed.

Table 6

<u>Change in Attitude or Beliefs About Importance of Issue</u>	<u>% Families Changing Attitude or Beliefs</u>
Enhancing child development (children's book suggestions, limiting screen time, etc.)	62.0%
Good nutrition (child nutrition, worries about nutrition, eating out, nutrition during pregnancy, etc.)	54.8%
Physical activity (physical activity with infants & toddlers, general physical activity, activity during pregnancy, etc.)	52.7%

The third outcome indicator is an observation by the home visitor that one or more family members changed their behavior. Home visitors were asked to report on whether or not specific changes in behavior were observed in one or more family members. These behavioral changes include:

- Increased positive interaction with young children,
- Changes in daily diet to incorporate more healthy food choices,
- Increased physical activity.

Home visitors reported behavioral changes that promote early childhood development in 79.6% of families. This is a notably higher percentage of families than were reported as having changed their attitude and beliefs about the importance of child development (62.0%). Although we would normally expect a change in attitudes and beliefs to precede a change in actual behavior, the increased levels of observed behavior change could be due to a high incidence of pre-intervention parental belief that child development activities are important but a lack of knowledge about what to do with young children to enhance development.

It appears from the data that parents are generally aware of the importance of early childhood development but may lack the knowledge and skills to interact with their children in ways that promote positive development.

Observed changes in daily diet leading to improved nutrition was reported in just over half of the families where this issue was addressed and changes in behavior related to increased levels of physical activity were observed in half of the families.

Table 7 summarizes the percentage of families where desired changes in behaviors were observed by home visitors.

Table 7

<u>Observed Change in Behavior</u>	<u>% Families Changing Behavior</u>
Enhancing child development (children's book suggestions, limiting screen time, etc.)	79.6%
Good nutrition (child nutrition, worries about nutrition, eating out, nutrition during pregnancy, etc.)	54.3%
Physical activity (physical activity with infants & toddlers, general physical activity, activity during pregnancy, etc.)	50.0%

Findings for Specific Sub-Groups of Families

Families Where Obesity Was an Identified Issue:

97 of the families included in the reported data had one or more family members who, in the opinion of the home visitor, were “significantly overweight”.

Process Measures:

Nearly all of the families where obesity was an issue were provided with information and education about the issue. 89 families (91.8%) were exposed to the Healthy Lifestyles

initial information and education materials about obesity. All 89 of these families also received some level of follow-up education or activity about issues related to being overweight.

Less than half (42.7%) of the families had the opportunity to attend program sponsored out-of-home group activities about weight loss and 63.4% of those families that had the opportunity to participate in out-of-home activities did so.

Process indicators related to overweight family members are summarized in Table 8-A for those families where home visitors reported significantly overweight family members.

Table 8-A

<u>Process Indicators – Obesity (Total = 89)</u>	Percent Families
Presented with information and education about issues related to obesity.	91.8%
Provided with follow-up education or activities about weight loss.	100.0%
With opportunity to attend out-of-home activities related to losing weight.	42.7%
With opportunity who participated in out-of-home activities related to losing weight.	63.4%

Outcome Measures:

In the opinion of the home visitors, 57.3% of the 89 families where obesity issues were addressed increased their knowledge about the negative health effects of being overweight. Home visitors noted some change in attitudes and belief about lifestyle choices that promote obesity in 39.3% of these families, and 41.6% of the families had one or more family members who lost weight during the six-month reporting period.

These outcome indicators are summarized in Table 8-B.

Table 8-B

<u>Outcome Indicators – Obesity (Total = 89)</u>	Percent Families
Increased knowledge about the detrimental effects of being overweight.	57.3%
Changed attitudes and beliefs about lifestyle issues leading to obesity.	39.3%
One or more overweight family members lost weight.	41.6%

Families Where Smoking Was an Identified Issue:

141 families reported on had one or more family members who smoked during the six-month reporting period.

Process Measures:

Home visitors addressed smoking as a lifestyle issue with 130 of these families (92.2%) by providing the initial information and education about the issue. Some follow-up education or activity was also made available to these 130 families about issues related to smoking during the reporting period.

27% of the families where smoking was an issue had the opportunity to attend program sponsored out-of-home group activities about smoking cessation and 59.5% of those families that had the opportunity to participate in out-of-home activities were reported as having attended one to five sessions.

Process indicators related to smoking are summarized in Table 9-A for those families where home visitors reported one or more family members who smoked.

Table 9-A

<u>Process Indicators – Smoking (Total = 130)</u>	Percent Families
Presented with information and education about issues related to smoking.	92.2%
Provided with follow-up education or activities about smoking.	100.0%
With opportunity to attend out-of-home activities related to smoking cessation.	27.0%
With opportunity who participated in out-of-home activities related to smoking cessation.	59.5%

Outcome Measures:

60.8% of the families where smoking was addressed by home visitors (130 families) increased their level of knowledge about smoking as a lifestyle issue. In the opinion of the home visitors, increased knowledge does not necessarily lead to a change in attitude about smoking. Less than half of those families where increased knowledge was noted were reported as having changed attitudes and beliefs about smoking (28.5%). A change in smoking behavior was noted in still fewer families. Home visitors reported that someone in the household had quit smoking during the six-month period in 19 families - 14.6% of the families where the issue was addressed.

One additional outcome measure was monitored related to smoking lifestyles. This measure is the percent of families where all smokers in the household changed their smoking habits so they no longer smoked inside the house. This is a desired outcome since second-hand smoke is known to affect the health of non-smokers who may be

exposed. The campaign appears to have been successful in getting smokers to reduce the exposure of other family members to second-hand smoke. Home visitors reported that smokers in nearly half (46.9%) of all households where this lifestyle issue was addressed (130 households) changed their smoking habits so they no longer smoked inside the house.

Data reported by home visitors indicates a notable reduction in exposure to second-hand smoke in households with smokers.

The outcome indicators related to a smoking lifestyle are summarized in Table 9-B.

Table 9-B

<u>Outcome Indicators – Smoking (Total = 130)</u>	Percent Families
Increased knowledge about smoking.	60.8%
Changed attitudes and beliefs about smoking as a lifestyle.	28.5%
Household member quit smoking.	14.6%
All household members who smoke changed smoking habits so they no longer smoke inside the house.	46.9%

Families Where Alcohol Use Was an Identified Issue:

16 families represented in the data had a family member who, in the opinion of the home visitor, drank excessively or otherwise abused alcohol during the reporting period.

Process Measures:

Home visitors addressed alcohol use as a lifestyle issue with 13 of the 16 families (81.3%) by providing the initial information and education about the issue. One to five incidents of follow-up education or activity was also made available to these 13 families about issues related to alcohol use during the reporting period.

6 of the families where alcohol use was an issue had the opportunity to attend program sponsored out-of-home group activities about this topic and 3 of those families that had the opportunity to participate in out-of-home activities were reported as having attended one to five sessions.

Process indicators related to alcohol are summarized in Table 10-A for those families where home visitors reported one or more family members who abuse alcohol.

Table 10-A

<u>Process Indicators – Alcohol (Total = 13)</u>	Percent Families
Presented with information and education about issues related to alcohol use.	81.3%
Provided with follow-up education or activities about alcohol use.	100.0%
With opportunity to attend out-of-home activities related to alcohol use.	46.2%
With opportunity who participated in out-of-home activities related to alcohol use.	50.0%

Outcome Measures:

Less than half of the 13 families where alcohol use was addressed definitely increased their knowledge about the issue based on home visitor reports. Increased knowledge about the abuse of alcohol was noted in 46.2% of these families (6 total families) during the six-month period. Home visitors reported that 3 of the families (23.1%) changed their attitude and beliefs about the issue, and reduced alcohol consumption was noted in 2 families representing 15.4% of the total number of families where alcohol use was considered to be a problem.

Outcome indicators related to alcohol use as a lifestyle issue are summarized in Table 10-B.

Table 10-B

<u>Outcome Indicators – Alcohol (Total = 13)</u>	Percent Families
Increased knowledge about excessive drinking and alcohol abuse.	46.2%
Changed attitudes and beliefs about alcohol use.	23.1%
Household member notably reduced alcohol consumption.	15.4%

Families Where Other Drug Use Was an Identified Issue:

15 families had a family member who, in the opinion of the home visitor, abused other drugs during the reporting period.

Process Measures:

Home visitors addressed drug abuse as a lifestyle issue with 13 of these families (86.7%) by providing the initial information and education about the issue. One to five incidents of follow-up education or activity was also made available to these 13 families about issues related to the abuse of other drugs during the reporting period.

9 of the 15 families where drug abuse was a reported issue had the opportunity to attend program sponsored out-of-home group activities about this topic and 3 of those

families that had the opportunity to participate in out-of-home activities were reported as having attended one to five sessions.

Process indicators related to other drug abuse are summarized in Table 11-A for those families where home visitors reported one or more family members who abused drugs.

Table 11-A

<u>Process Indicators – Other Drugs (Total = 13)</u>	Percent Families
Presented with information and education about issues related to other drug abuse.	86.7%
Provided with follow-up education or activities about other drug abuse.	100.0%
With opportunity to attend out-of-home activities related to abuse of other drugs.	60.0%
With opportunity who participated in out-of-home activities related to abuse of other drugs.	33.3%

Outcome Measures:

Home visitors noted a definite increase in knowledge about other drug use in 9 of the 13 families (69.2%) where this issue was addressed. Changes in attitude and beliefs about other drug use were, in the opinion of the home visitors, observed within far fewer of these families. A change in attitude about this lifestyle issue was noted in only 3 of the 13 families (23.1%); however, home visitors reported that one or more household members had “stopped using other drugs” during the six-month reporting period in all three of these households.

The outcome indicators related to other drug use are summarized in Table 11-B.

Table 11-B

<u>Outcome Indicators – Other Drugs (Total = 13)</u>	Percent Families
Increased knowledge about other drug use.	69.2%
Changed attitudes and beliefs about other drug use.	23.1%
Household member stopped using other drugs.	23.1%

Families Where There Was a Pregnancy:

Home visitors indicated there were 91 families where there was a pregnancy during the six-month reporting period; however, outcome indicators for this particular sub-group of families were reported for only 89 of the pregnant women. Outcome data collected for this particular sub-group (families with a pregnancy) focused on smoking by the

pregnant woman or other household members, alcohol and/or other drug use by the pregnant woman, and overall pregnancy outcomes (low birth weight, premature delivery, etc.) for those women that gave birth during the reporting period.

Outcome Indicators – Pregnant Women:

89 pregnant women were reported on. Of these 89 women, 77 did not use alcohol during the pregnancy, 79 did not use any drugs for non-medical purposes, and 45 did not smoke. Among the 12 women who did use alcohol, 4 stopped using alcohol at some time during the pregnancy (25.0%). 1 of the 10 women who used other drugs stopped during pregnancy (10.0%); and 18 of the 44 smokers stopped smoking at some point during the pregnancy (40.9%).

Exposure to second hand smoke was also reported in the data. 36 of the 89 pregnant women were not exposed to second-hand smoke either at home or in the workplace. All smokers in the household stopped smoking inside the house where the pregnant woman would be exposed to second hand smoke in 14 of the households.

Outcome indicators for pregnant women are summarized in Table 12.

Table 12

<u>Outcome Indicators – Pregnant Women (Total = 89)</u>	Percent Pregnancies
Did not use alcohol during pregnancy.	86.5%
Did not use other drugs during pregnancy.	88.8%
Did not smoke during pregnancy.	50.6%
Alcohol users who stopped using at some point during pregnancy.	25.0%
Drug users who stopped using at some point during pregnancy.	10.0%
Smokers who stopped smoking at some point during pregnancy.	40.9%
Was not exposed to second-hand smoke during pregnancy.	40.4%
Smoking households where all smokers stopped smoking inside during pregnancy.	26.4%

Additional Discussion of Smoking During Pregnancy:

A comparative analysis of the evaluation data for the subset of families where a pregnant woman smoked during pregnancy vs. the subset of families where a pregnant woman did not smoke during pregnancy was also conducted. There were a total of 34 households where a pregnant woman smoked during her pregnancy. In 23 of these families (67.6%) the pregnant woman smoked and was also exposed to other household members who smoked (second-hand smoke).

There were 19 of the women (55.9%) who smoked during pregnancy who either gave birth or otherwise terminated the pregnancy during the six-month reporting period. Key pregnancy outcomes for the sub-group of pregnant women who smoked during pregnancy and gave birth or otherwise terminated the pregnancy are summarized below:

- 2 of the births to women who smoked during the pregnancy were low birth weight.
- There were no premature deliveries (less than 36 weeks).
- 2 of the women who smoked during the pregnancy miscarried.

Thus, 4 of the 19 smoking pregnancies that ended during the six-month reporting period were either low birth weight or were miscarriages. This represents 21.1% of the pregnancies that ended during the six-month period.

These pregnancy outcomes are noticeably worse than the outcomes for the group of pregnant women that did not smoke during pregnancy.

Pregnancy outcomes for women who smoked throughout their pregnancy were disproportionately worse than outcomes for women who did not smoke at all or gave up smoking at some point during pregnancy.

There were 32 births to women who did not smoke during pregnancy. Of these 32 births:

- 1 of the births was a low birth weight baby
- 2 of the births were healthy babies but premature (prior to 36 weeks).
- There were no miscarriages or other complications among the group of women who did not smoke during pregnancy.

Thus, only 1 of the non-smoking pregnancies that ended during the six-month reporting period was either low birth weight or a miscarriage. This is 3.1% of births to non-smoking women.

Further, 18 of the women who smoked during pregnancy stopped smoking at some point while pregnant. 8 of these 18 women who stopped smoking during the pregnancy gave birth during this reporting period and none of these 8 babies were low birth weight, premature, or miscarried. All of the low birth weight babies and miscarriages were to women who smoked throughout their pregnancy.

Effect of Out-of-Home Activities on Desired Lifestyle Changes

Reported data was analyzed to determine if there was any obvious difference in desired outcomes between those families that participated in out-of-home activities and those that did not. The percentage of families that were reported as having changed their behavior related to each lifestyle issue was examined for families who participated in one to five out-of-home activities as compared to those that did not participate in any out-of-home activity. The percentage of families exhibiting the desired behavior change

for each lifestyle issue is defined as the number of families identified by the home visitor as having achieved the desired outcome (improved their nutrition, lost weight, etc.) divided by the total number of families where the issue was addressed.

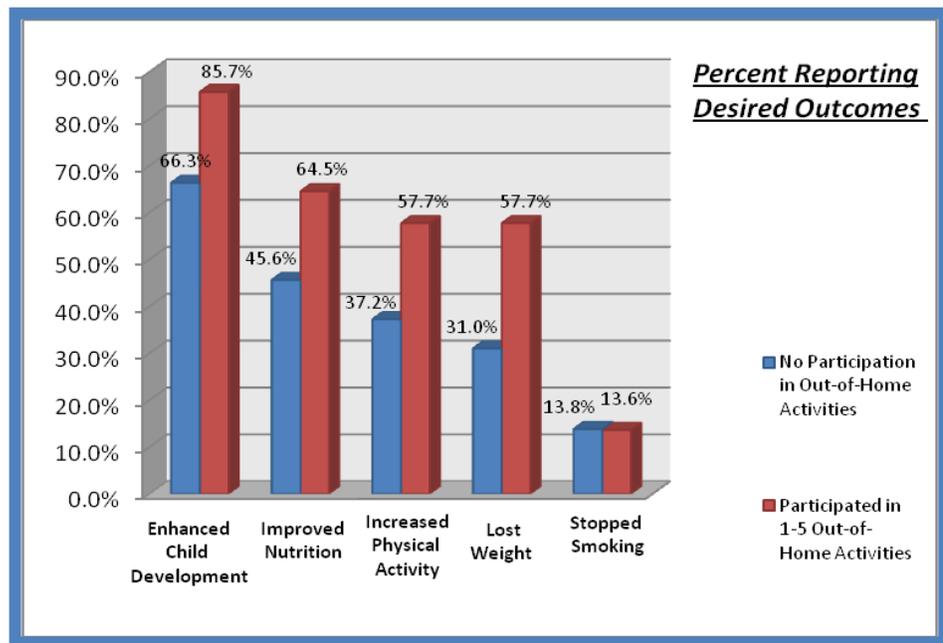
This comparative analysis was conducted for six of the eight lifestyle issues addressed by the campaign – the numbers of families where issues related to alcohol abuse and drug abuse was addressed were too small to be meaningful so these two issues were not included.

Although any definitive results related to the effect of out-of-home activities on positive changes in lifestyle behavior would require further research, it is interesting to note that the percentage of families reported as having changed their behavior was notably higher across five of the six issues for those families that participated in one to five out-of-home activities. Differences appear to be meaningful in all three of the areas routinely addressed with families by in-home family education programs (child development, nutrition, and physical activity). Outcomes related to behavior change were also notably more positive related to weight loss for those families that participated in at least some level of out-of-home activity related to that issue.

Chart 1

There was no meaningful difference noted in the area of smoking cessation for those families that participated in out-of-home activity related to smoking and those that did not.

The results of this analysis are summarized in Chart 1.



General Conclusions:

- The Healthy Lifestyles Campaign is being implemented within the twelve in-home family education programs that reported data in a manner that appears to be consistent with the program model as defined by the logic model.
- Campaign activities in areas of child development, improved nutrition, and healthy physical activity are carried out with nearly all families served by the in-home family education programs.
- Home visitors observed increased knowledge and positive changes in attitudes and beliefs about specific lifestyle issues within a majority of families exposed to the information and education modules about child development, nutrition, and physical activity.
- Positive changes in how parents interact with their young children to enhance child development were reported in 80% of all families served.
- There are indications from the data that most parents know (believe) child development issues are important but parents tend to lack knowledge and specific techniques for interacting with their children in ways that enhance development.
- Out-of-home group activities are not available to some families; and when available, only about one-third of the families served by the programs participate in these activities.
- Families that participate in out-of-home activities to reinforce desired changes related to a particular lifestyle issue have better outcomes than those that do not.
- The campaign appears to be having some success in addressing issues of obesity. Just over 40% of the families where this issue is addressed are reported as having a family member who lost weight.
- Desired changes in behavior related to use of alcohol, tobacco, and other drugs were observed by home visitors in about 15% to 20% of the families where these issues were addressed.
- Although only about 15% of the families where smoking was addressed have a family member who is reported as having quit, nearly half of all smoking households are reported as having changed their behavior so that smokers no longer smoke inside the house.
- Pregnancy outcomes are notably worse for women who smoke throughout the duration of their pregnancy.