



# Colorado NFP

## Evaluation Report 13

### Program Initiation (January 2, 2000) through June 30, 2013

September 15, 2013

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## Introduction or Cover Letter from Program Quality Director

September 15, 2013

Dear Dr. Amy Barton, University of Colorado Anschutz Medical Campus:

The National Service Office Program Quality Department is pleased to provide the 2013 Nurse-Family Partnership (NFP) Annual Evaluation Report for Colorado. This report catalogs the ongoing and cumulative work of Colorado Nurse Home Visitors, Supervisors and Consultants to support the NFP goals of:

- Improved prenatal outcomes,
- Improved child health and development, and
- Improved family sufficiency for high risk first time mothers and their children

Because of the requirements of the Affordable Care Act Maternal, Infant, and Early Childhood Home Visiting program (MIECHV there have been several revisions to the NFP Data Collection Forms in the last 24 months to meet the requirements and to respond to requests from the field. Additionally, there has been a review of the Quarterly Report calculations to correspond with the changes in the data collection forms. These changes may be apparent in the report.

The NSO Program Quality Department has reviewed all tables and calculations to ensure the most accurate report based on the available data. Below is a description of data updates that are part of the 2013 Colorado Annual Report. As the reader reviews the report, there will be additional footnotes or explanations for these changes.

- For the 2012-13 fiscal year, Colorado received MIECHV funding to serve 13 clients in Pueblo County and 50 clients in Tri-County NFP. We would anticipate that their exclusion from the cumulative calculations would have little if any impact. These clients are included in all general calculations due to their small numbers. The inclusion of MIECHV clients is consistent with the 2011-12 fiscal year report.
- Calculations for referrals and client characteristics at intake (Table 4 and 6) were updated to align with the improvements made in the standard Quarterly Report calculations.
- For intimate partner violence (Table 26), the calculation was updated to use more specific questions indicating physical violence. The questions are specific to physical abuse and fear of the partner from our standard *Relationship Assessment*. More details are in the table footnote.
- An additional form revision occurred in June of 2012. Data entry into ETO became available on August 20, 2012. It is possible that some data may appear as missing due to these mapping changes. Most notable of the revisions in June 2012 were the changes to the education and income demographic questions.

Please feel free to contact the Program Quality team or me for any questions at [molly.ofallon@nursefamilypartnership.org](mailto:molly.ofallon@nursefamilypartnership.org) or 303-327-4248.

Sincerely,

Molly O'Fallon, RNC, CS  
Director, Program Quality

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## Executive Summary

This is the thirteenth annual Colorado NFP evaluation report for the Nurse-Family Partnership (NFP), based on the intervention model developed and tested by Dr. David Olds and colleagues (see Appendix A). Multiple counties coordinate the implementation of this program in the State of Colorado. This report presents analysis of cumulative data available from program initiation January 2, 2000 through June 30, 2013, and covers the pregnancy, infancy, and toddler phases of the program.

Throughout the report, indicators of program implementation, maternal and child health and functioning for Colorado NFP clients are compared to the national sample of Nurse-Family Partnership clients.

### Colorado Performance Against NFP National Averages

Colorado NFP performs well or aligns with the national averages in the following areas of program implementation and program outcomes, including:

- Clients entering the program by 16 weeks pregnancy;
- Clients received more visits in each program phase;
- Content of home visits closely matches program guidelines;
- Retention of clients during the pregnancy and infancy phase;
- Comparable rates of preterm birth rates for infants overall;
- Clients who received at least one referral to outside services;
- Clients who initiate breast feeding, as well as those who are still breastfeeding at infant age 6 months and 12 months; and
- Workforce participation at program completion.

Colorado NFP has achieved statistically significant reduction in:

- Smoking during pregnancy,
- Marijuana use during pregnancy,
- Alcohol use during pregnancy, and
- Experience of violence during pregnancy.

Colorado is lower than the national NFP averages in the following areas:

- Clients entering the program by the end of 28 weeks gestation (9% lower); and
- Clients who received their first prenatal visit with a health care provider within the first trimester (2% lower) (Figure 3 and Table 22).

Details about each of these areas of performance can be found below, and in the body of this report. The Colorado partners responsible for administering the NFP program continually monitor progress toward the national averages and objectives, both at the site and state level. Colorado NFP employs a continuous quality improvement and technical assistance loop to improve performance where needed. A diagram outlining the partners and their respective roles and responsibilities is included as Appendix C.



## Characteristics of Colorado NFP Clients

- 16,682 women ever enrolled as of June 30, 2013: median age 20; 50% completed high school/GED; median education 9 years for non-high-school graduates; 78% unmarried; 82% unemployed; 71.6% Medicaid recipients. (Tables 6, 7, 8)
- Race/Ethnicity: 44% Hispanic, 49% non-Hispanic White; 3% multiracial/other, 4% African American/Black, 3% Native American, 2% Asian. (Table 6)
- 11,388 children have been served since inception.
- 2,335 families were active on June 30, 2013.
- 2,625 children were active on June 30, 2013.

## Program Implementation

- For Colorado NFP 45% of clients entered the program by 16 weeks of pregnancy, a rate equal to the national NFP average of 45%. A total of 84% of Colorado NFP clients were enrolled by 28 weeks gestation compared to 94% of NFP clients nationwide. Colorado Statue and Rules allow NFP program to enroll women up to the end of the first month of the baby's life. This feature of the Colorado program impacts NFP sites ability to achieve the NFP objective of enrolling 100% of clients prior to the end of the 28<sup>th</sup> week of gestation (see Appendix B for a description of Nurse-Family Partnership Objectives). Early enrollment allows nurse home visitors more time to work with clients on health-related behaviors known to improve pregnancy outcomes and to build relationships with clients. (Figure 3)
- Program guidelines prescribe a certain schedule of visits that a client should receive. Colorado NFP clients received a higher percentage of those visits as compared to national NFP clients. This does not include any alternative visit schedules. Percentages of expected visits complete (Tables 11, 12, 13):
  - Pregnancy: 77% (68% national NFP);
  - Infancy: 56% (51% national NFP); and
  - Toddlerhood: 35% (30% of national NFP).
- Colorado NFP has matched the program guidelines for content of home visits of the five program content domains, only life course development during Toddlerhood is less than NFP program objectives (16% vs. 18-20% Objective). (Table 15)
- Attrition rates:
  - Pregnancy: 13% (15.4% national NFP) (Table 19)
  - Infancy: 33% (33.5% national NFP) (Table 20)
  - Toddlerhood: 17.6% (18.8% national NFP) (Table 21)

## Program Outcomes

- A statistically significant reduction of 21% in smoking during pregnancy (16% national NFP) (Table 24).
- A 63% reduction in marijuana use during pregnancy.
- A 32% reduction in alcohol use during pregnancy.
- A 49% reduction in experience of violence during pregnancy. (Table 26)
- 9.9% preterm birth rate (9.8% national NFP); rates of predominant ethnic groups were:
  - 8.3% for Hispanics (8.3% national NFP),

- 9.1% for Whites (9.1% national NFP), and
- 10.7% for multiracial/others (7.8% national NFP). (Table 27)
- 9.2% low birth weight rate (8.4% national NFP); rates for predominant ethnic groups were:
  - 8.9% for Hispanics (7.5% national NFP),
  - 9.2% for White (7.3% national NFP), and
  - 10.1% for multiracial/others (6.9% national NFP). (Table 29)
- Language development is no longer reported by NFP. Please see Table 32 for ASQ outcomes. For the ASQ at 4 months infancy, 96% of children were assessed and 6% needed a referral. At 20 months infancy, 95% of children were assessed and 7% needed a referral.
- At 12 months of infant age, 86% of infants were fully immunized (87% national NFP). By 24 months of child's age, 90% were fully immunized (92% national NFP). (Figure 4)
- 92% of clients initiated breastfeeding (80% national NFP); 36% of clients were breastfeeding at 6 months (29% national NFP); 21% of clients were breastfeeding at 12 months of infancy (17% national NFP). (Figure 5)
- At 12 months postpartum, 11% of clients reported a subsequent pregnancy (12% national NFP). 29% of clients reported subsequent pregnancies within 24 months of birth of their child (29% national NFP). (Figure 6)
- Of those who entered the program without a high school diploma or GED, 40% completed their diploma/GED by program completion (40% national NFP) and 14% were continuing their education beyond high school (14% national NFP); an additional 17% were still working toward their diploma/GED (19% national NFP). (Tables 36, 37)
- 73% of Colorado NFP clients 18 years or older at intake (70% national NFP) and 61% of those 17 years or younger (57% national NFP) were working at program completion. (Figures 8, 9)
- Clients worked an average of 6 months during the first postpartum year (5.7 national NFP), and 8 months during the second postpartum year (7.8 national NFP). (Figure 10)

## Part I: Introduction

### Descriptions of Colorado Agencies Implementing the NFP

Table 1 presents information on the agencies implementing the NFP program in Colorado including program start dates, and counties served as of June 30, 2013.

*Table 1. Description of Colorado Agencies Implementing the NFP*

<b>Implementing Agency</b>	<b>First Visit Date</b>	<b>Counties Served by NFP</b>	<b>Target Enrollment</b>
Boulder County Public Health	Sep-02	Boulder	100
Denver Health & Hospital Authority	Feb-00	Denver	100
Eagle County Health and Human Services	Nov-08	Eagle	50
El Paso County Department of Health and Environment	Feb-01	El Paso, Teller	250
Family Visitor Programs NFP	Mar-03	Eagle, Garfield, Pitkin	100
Jefferson County Dept. of Health/ NFP Partners for Healthy Families	Dec-98	Jefferson, Broomfield	175
Kit Carson	Mar-11	Kit Carson	50
Larimer County NFP	Nov-00	Larimer	200
Mesa County Health Department	Sep-00	Mesa	200
Montrose County/Region 10 Nurse-Family Partnership	May-01	Delta, Gunnison, Hinsdale, Montrose, Ouray, San Miguel	75
Northwest Colorado NFP	May-01	Jackson, Moffat, Rio Blanco, Routt	50
Prowers County Public Health/ Southeast CO	Aug-01	Baca, Bent, Kiowa, Prowers	50
Pueblo Community Health Center	Mar-01	Pueblo, Huerfano	125
San Juan Basin Health Department/Healthy Kids	Feb-00	Archuleta, Dolores, La Plata, Montezuma, San Juan	108
St. Anthony Central Hospital	Oct-05	Denver, Adams, Jefferson	200
Summit County Public Health Nursing'/Intermountain NFP	April-01	Chaffee, Clear Creek, Gilpin, Lake, Summit, Park	132
Tri-County NFP	Mar-00	Adams, Arapahoe, Douglas	250
Valley-Wide Health Services, Inc./San Luis Valley NFP	June-01	Alamosa, Conejos, Costilla, Mineral, Rio Grande, Saguache	125
Weld County Department of Public Health and Environment	May-01	Weld	150
<b>Total Targeted Enrollment</b>			<b>2,490</b>

## Characteristics of NFP Staff

Data on the background characteristics of the nurse home visitors and supervisors for the NFP in Colorado were available for 274 staff members, including 38 supervisors and 236 nurse home visitors. Education, nursing experience and demographic information are presented in Table 2.

Table 2. *Characteristics of Colorado NFP Staff*

	Supervisors (N=38)	Nurse Home Visitors (N=236)
Average number of years in nursing	22	14
% with maternal/child health experience	84%	67%
% with public or community health experience	79%	55%
Average number of years of supervisory experience	8	5
<b>Race</b>		
White	87%	72%
African American/Black	0%	1%
Asian/Pacific Islander	0%	0%
Unknown	13%	26%
<b>Ethnicity</b>		
Hispanic	5%	9%
Non-Hispanic	87%	70%
Unknown	8%	21%
<b>Highest Nursing Degree</b>		
Associate Degree	0%	6%
Diploma	0%	1%
Bachelors of Science	55%	65%
Masters of Science	21%	9%
Nursing Doctorate	3%	0%
Unknown	18%	17%

## Part II: Colorado State NFP Program

### Referrals to the Colorado NFP

Table 3 provides information on the referrals to Colorado NFP entered into the Efforts to Outcomes (ETO™) system. Eligible referrals are clients who meet national and local NFP criteria.

Table 3. Referrals through June 30, 2013

	Colorado NFP		National NFP	
Eligible Referrals	41,517		251,545	
Referrals not located	9,670		74,237	
Referrals not meeting program criteria	5,954		55,699	
Referrals with disposition unknown	0		51	
<b>Total Number of Referrals</b>	<b>57,078</b>		<b>380,965</b>	
Eligible referrals not enrolled due to full caseloads	14,610 / 41,517	35%	36,602 / 251,545	15%
Eligible referrals for whom program had space	26,940		215,176	
Eligible referrals declining enrollment	10,716 / 26,940	40%	73,240 / 215,176	34%
<b>Eligible referrals enrolled</b>	16,099 / 26,940	60%	140,358 / 215,176	65%

*Eligible referrals are those that meet national and local NFP criteria*

*Clients may have multiple referrals*

*This table does not include open referrals*

Table 4 presents information on the sources of referrals to the Colorado NFP.

Table 4. Referrals from Selected Sources

Referral Source	Colorado NFP				National NFP			
	All Referrals		Referrals Enrolled in NFP		All Referrals		Referrals Enrolled in NFP	
WIC	11,865	36.9%	1,802	22.0%	44,553	21.1%	12,794	18.4%
Pregnancy Testing Clinic	1,910	5.9%	641	7.8%	31,325	14.8%	7,819	11.3%
Healthcare Provider / Clinic	7,758	24.2%	2,575	31.5%	73,204	34.6%	23,980	34.5%
School	617	1.9%	363	4.4%	8,774	4.1%	4,662	6.7%
NFP Client (current or past)	387	1.2%	275	3.4%	3,259	1.5%	2,301	3.3%
Other home visiting program	1,001	3.1%	388	4.7%	6,899	3.3%	2,303	3.3%
Medicaid	5,996	18.7%	1,074	13.1%	11,133	5.3%	2,409	3.5%
Self	209	0.7%	145	1.8%	3,366	1.6%	2,209	3.2%
Other (includes other human service agency)	2,398	7.5%	926	11.3%	29,155	13.8%	11,091	16.0%

*\*Data collection on Referral Source began October 1, 2006.*

## Caseload Enrollment

Table 5 shows the number of clients enrolled in the Colorado NFP each year and their participation status as of June 30, 2013.

*Table 5. Client Status by Year of Enrollment*

<b>Enrollment Year</b>	<b>Total Enrolled</b>	<b>Currently Active</b>		<b>Left Program Early</b>	
2000	314	0	0%	221	70%
2001	973	0	0%	661	68%
2002	952	0	0%	607	64%
2003	921	0	0%	594	64%
2004	1,090	0	0%	715	66%
2005	1,410	0	0%	896	64%
2006	1,292	0	0%	841	65%
2007	1,318	0	0%	805	61%
2008	1,448	0	0%	909	63%
2009	1,583	1	0%	956	60%
2010	1,449	40	3%	858	59%
2011	1,510	558	37%	875	58%
2012	1,509	923	61%	578	38%
2013	913	813	89%	100	11%
<b>Total</b>	<b>16,682</b>	<b>2,335</b>	<b>14%</b>	<b>9,616</b>	<b>58%</b>

*Clients enrolled in later years have not been in the program long enough to have the opportunity to graduate and have had less time to drop from the program.*

*Clients from closed sites are not included*

*2013 data is through June 30*

## Client Characteristics at Intake

Demographic information gathered for evaluative purposes includes a variety of characteristics about participants, other family members, and their households. This information is provided by the participant, who may or may not know all of the information being requested, particularly if the participant is a young teen.

In October 2010, the categories for race changed to match Federal race and ethnicity categories. Previously, “White not Hispanic” and “Hispanic” were choices for race. Hispanic origin is now captured separately under ethnicity and is not listed in the race category. This effects clients who previously identified themselves as being of Hispanic race, their race will now be missing unless they had previously selected another race in addition to Hispanic. In addition, clients previously identified as Asian or African American/Black, their race will be the same but their ethnicity could be missing.

*Table 6. Characteristics of Clients at Program Intake*

	Colorado NFP	National NFP
Number Enrolled	16,971	168,944
First-time mothers	99%	99%
Unmarried	78%	83%
Age of client (median years)	20	19
<b>Percent in each age category</b>		
Less than 15	2%	3%
Between 15 and 17	23%	26%
Between 18 and 19	25%	26%
Between 20 and 24	33%	31%
Between 25 and 29	11%	9%
Greater than or Equal to 30	6%	5%
<b>Ethnicity</b>		
Hispanic or Latina	44%	24%
Not Hispanic or Latina	49%	63%
Ethnicity declined	1%	1%
Ethnicity Unknown	6%	12%
<b>Race</b>		
American Indian or Alaska Native	3%	4%
Asian or Pacific Islander	2%	2%
Black or African American	4%	23%
Declined to self-identify R	4%	4%
Multiracial	3%	5%
Race unknown	33%	20%
White	51%	43%
<b>Primary Language*</b>		
(n=)	9,811	98,414
English	80%	86%
Spanish	18%	12%
Other	2%	2%
Unknown	0%	0%

*\*Data collection on Primary Language began on October 1, 2006, so the percentages are based only on clients enrolled after October 1, 2006. All languages other than English and Spanish are reported in “Other.” The race/ethnicity categories were updated to align with the NFP Quarterly Report.*

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*Table 7. Client Education at Program Intake*

	Colorado NFP			National NFP		
	17 years or younger	18 years or older	Overall	17 years or younger	18 years or older	Overall
<b>Number of Clients</b>	4,211	12,732	16,928	48,349	119,874	<b>167,496</b>
<b>Completed high school or GED</b>	4%	65%	50%	4%	66%	<b>48%</b>
High school diploma	3%	60%		3%	62%	
GED*	1%	5%		1%	4%	
<b>Median number of years education**</b>	9	10		9	10	

*\*Data collection for this item began October 1, 2006*

*\*\*Includes only clients who have not completed high school and do not have a GED  
Only includes clients who have a date of birth and education information at intake.*

*Table 8. Client Economic Factors at Program Intake*

	Colorado NFP	National NFP
Annual household income (median)	\$16,000	\$9,000
<b>Use of Government Assistance</b>		
WIC	69.54%	72.67%
Medicaid	71.61%	70.00%
Food Stamps	14.36%	21.73%
TANF	3.58%	6.41%
Private insurance*	1.36%	1.92%
<b>For those working at intake</b>		
17 years and younger working full-time	2%	2%
18 years and older working full-time	16%	16%

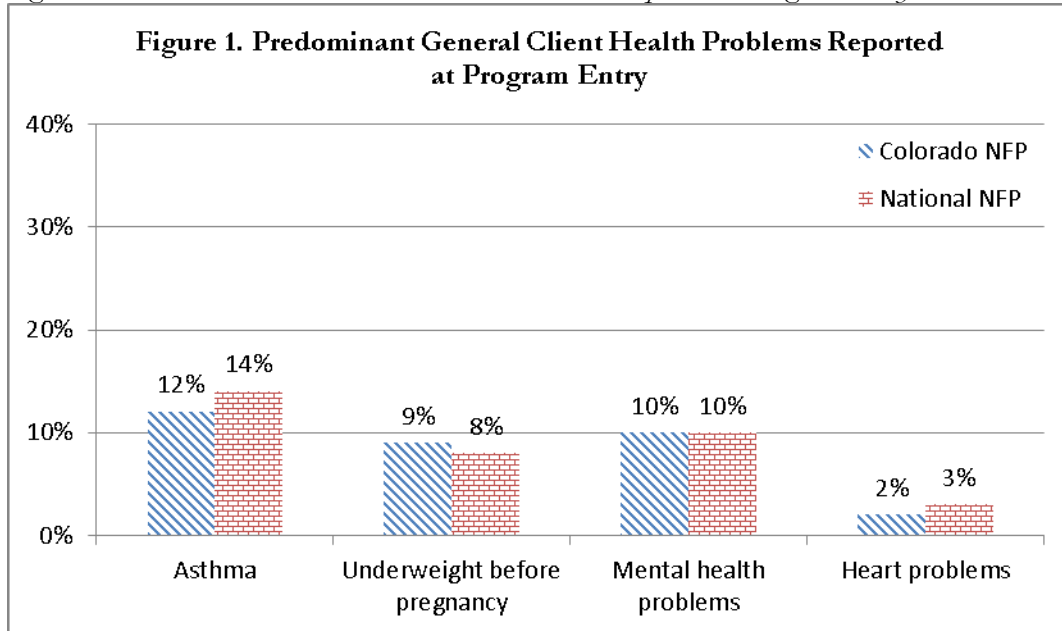
*\*Data collection for private insurance coverage began on October 1, 2006.  
Household income categories changed in 2010  
Median reflects the midpoint of the median category  
"For those working at intake" denominator includes those who work full and part time*



## Maternal Health Characteristics

The client's general health is an important component of a healthy pregnancy and is assessed by nurse home visitors at entry into the program. The distribution of the predominant client health problems at intake are noted in.

Figure 1. Predominant General Client Health Problems Reported at Program Entry



\*Underweight before pregnancy is a BMI of less than or equal to 18.5

## Household Information

Information on household composition or the living situation of clients is shown in Table 9.

Table 9. Client Household Composition

	Colorado NFP	National NFP
Lives in independent home (household composition**):		
Lives alone	4.6%	5.2%
Lives with husband/partner	1.2%	1.2%
Lives with mother	14.8%	19.2%
Lives with others	78.1%	72.3%
Lives in group home/shelter*	0.8%	1.6%
Confined to institutional facility (residential treatment facility / incarcerated)*	0.2%	0.3%
Homeless*	0.3%	0.4%

\*These options for living arrangements were added in October 2006; percentages for these items will therefore appear lower than percentages for other items

\*\*Choices are not exclusive as of October 2010 (clients may choose more than one category)

### Fatherhood Information

Clients are asked at intake to report how frequently they see the biological father. This information is presented in Table 10.

Table 10. Frequency of Contact with Father of Child

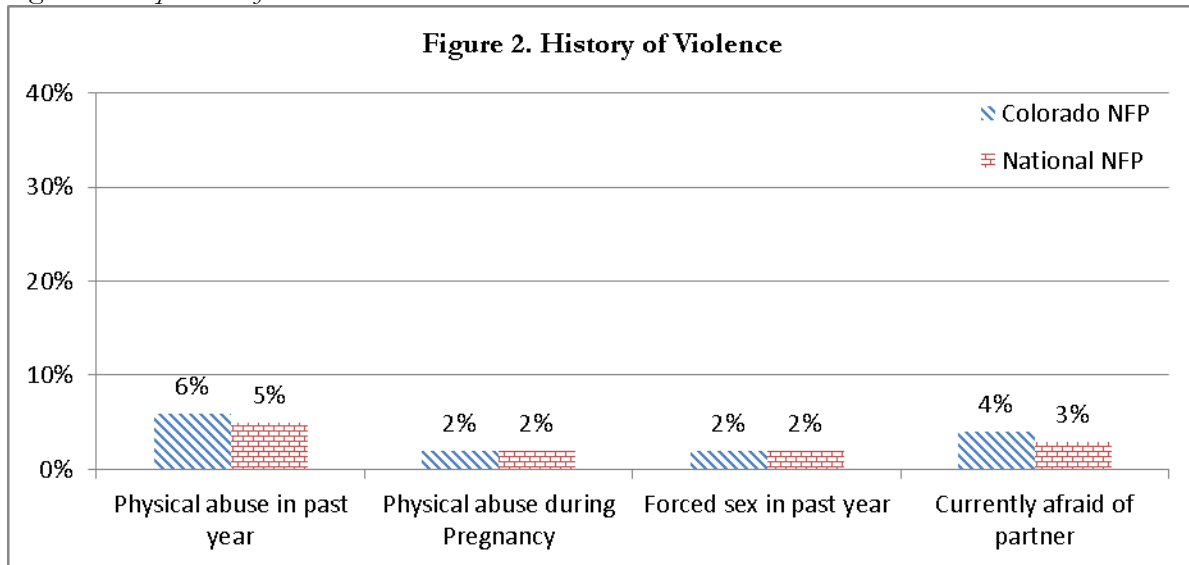
	Colorado NFP (n=16,015)	National NFP (n=158,704)
<b>Contact with father of child</b>		
Daily	68%	66%
At least once a week	9%	11%
Less than once a week	7%	8%
Not at all	16%	15%

### Maternal Experience of Intimate Partner Violence

Nurse home visitors assess at intake the extent to which clients have experienced intimate partner (partner, ex-partner, boyfriend or ex-boyfriend) violence in the last year. Previously, this information was collected for various times in the clients' lives and reflected emotional and physical abuse from any source. The abuse of clients from sources other than an intimate partner is no longer included in the report.

Intimate partner violence information is presented in Figure 2. It should be noted that data are based on self-reported information which may not be divulged until the nurse/client relationship has developed and is more trusting. This should be taken into consideration when interpreting this data.

Figure 2. Experience of Intimate Partner Violence Collected at Intake



\*Beginning in October 2010, the scope of the questions changed. Previously, clients reported abuse by anyone; current reporting is regarding partner only. Where percentages match, height of bars in the chart is reflective of rounding to nearest whole number.

## Program Implementation

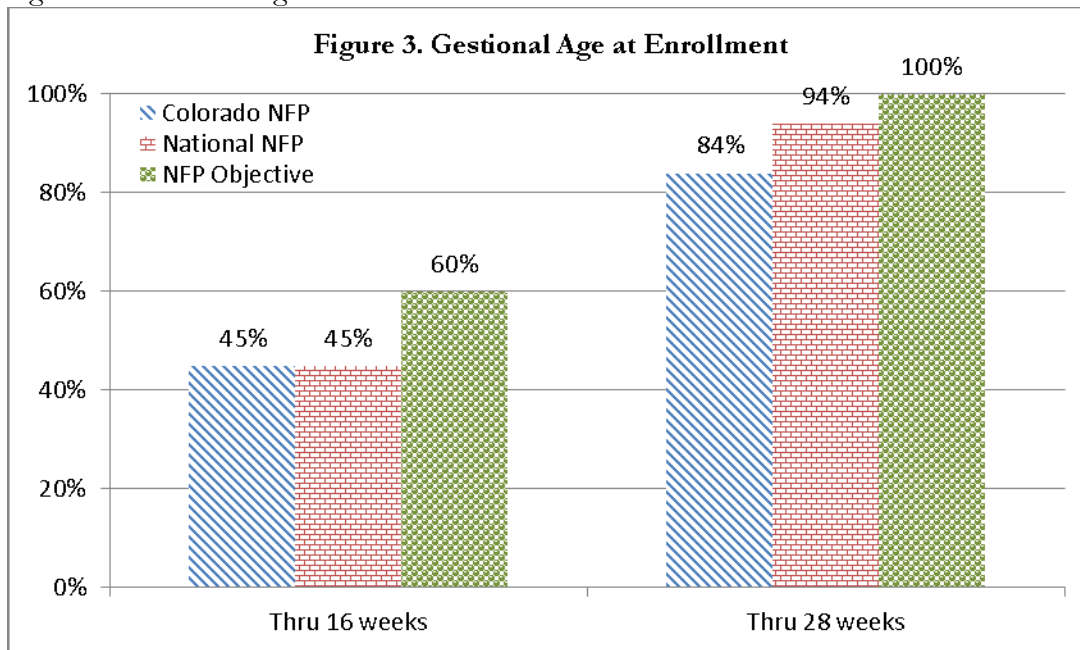
A critical feature of this evaluation has to do with whether the program is being conducted with fidelity to the model on which it is based. The analysis of fidelity as related to client participation and interaction is considered from the following standpoints:

- The number of weeks of pregnancy at program entry.
- The quantity of the program received by clients (frequency and duration of visits).
- The construct of visitation (i.e., the amount of time nurses spend on the different content domains as instructed in program guidelines).
- The percentage of families who drop out of the program early for various reasons.

## Gestational Age at Program Entry

Figure 3 presents information on when Colorado NFP clients entered the program with respect to gestational age and compares it to national data for NFP clients and to NFP Objectives. Program implementing agencies are encouraged to strive towards the NFP Objective of having 60% of clients enrolled by the 16<sup>th</sup> week of pregnancy and the remainder enrolled by the 28<sup>th</sup> week of pregnancy. Early enrollment allows nurse home visitors more time to work with clients on health-related behaviors known to improve pregnancy outcomes and to build relationships with clients.

Figure 3. Gestational Age at Enrollment



\*Enrolled at 28 weeks includes those enrolled at 16 weeks

\*Data based on clients for whom Gestational Age at Intake is available

### Number and Duration of Completed Home Visits

The NFP Objective for percentage of expected visits completed is the long range benchmark against which implementing agencies should compare their performance. Information is presented separately for those participants who began the phase and those who completed the program phase. National NFP data and NFP Objectives are provided for comparison purposes.

Table 11. Number and Duration of Completed Nurse Home Visits during Pregnancy phase

	Colorado NFP		National NFP		NFP Objective
	Number	Average	Number	Average	
<b>Pregnancy</b>					
Clients who began phase	15,234		153,027		
Completed visits	135,808	8.9	1,292,818	8.4	
Expected visits	176,680		1,895,215		
Percentage of Expected Visits Completed		77%		68%	80%
Attempted Visits†	13,642		140,169		
Average Visit Length (minutes)		71.7		74.7	60
Clients who completed pregnancy phase	12,670		121,728		
Completed visits	124,335	9.8	1,157,960	9.5	
Expected visits	151,410		1,573,712		
Percentage of Expected Visits Completed		82%		74%	

†An attempted visit is one in which the nurse tried to make a visit, but for some reason was unable to conduct the visit (e.g., client was not home when nurse arrived, or client refused visit when nurse arrived). If a family calls to cancel a scheduled visit, this is not considered an attempted visit.

Pregnancy phase includes intake to birth

Table 12. Number and Duration of Completed Nurse Home Visits during Infancy phase

	Colorado NFP		National NFP		NFP Objective
	Number	Average	Number	Average	
<b>Infancy</b>					
Clients who began phase	12,739		113,277		
Completed visits	192,329	15.1	1,559,780	13.8	
Expected visits	343,953		3,059,532		
Percentage of Expected Visits Completed		56%		51%	65%
Attempted Visits†	26,280		219,883		
Average Visit Length (minutes)		68.7		72.4	60
Clients who completed infancy phase	7,665		66,050		
Completed visits	152,065	19.8	1,209,166	18.3	
Expected visits	206,955		1,783,350		
Percentage of Expected Visits Completed		73%		68%	

†An attempted visit is one in which the nurse tried to make a visit, but for some reason was unable to conduct the visit (e.g., client was not home when nurse arrived, or client refused visit when nurse arrived). If a family calls to cancel a scheduled visit, this is not considered an attempted visit.

Infancy phase includes birth through 11 months

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Table 13. Number and Duration of Completed Nurse Home Visits during Toddler phase

	Colorado NFP		National NFP		NFP Objective
	Number	Average	Number	Average	
<b>Toddlerhood</b>					
Clients who began phase	11,526		99,882		
Completed visits	88,089	7.6	665,157	6.7	
Expected visits	253,572		2,198,262		
Percentage of Expected Visits Completed		35%		30%	60%
Attempted Visits†	14,605		105,627		
Average Visit Length (minutes)		68.3		70.5	60
Clients who completed toddlerhood phase	4,775		39,496		
Completed visits	74,290	15.6	546,066	13.8	
Expected visits	105,050		868,912		
Percentage of Expected Visits Completed		71%		63%	

†An attempted visit is one in which the nurse tried to make a visit, but for some reason was unable to conduct the visit (e.g., client was not home when nurse arrived, or client refused visit when nurse arrived). If a family calls to cancel a scheduled visit, this is not considered an attempted visit.  
Toddler phase includes 12 through 24 months

**Location of Visits**

Also of interest is the location of a visit. Table 14 presents this information, looking at the percentage of clients who had at least one visit at each of various locations. Clients may have been visited one time at home and one time at another location, such as school, and would therefore be included in both locations.

Table 14. Location of Visits

	Colorado NFP			National NFP		
	Pregnancy	Infancy	Toddlerhood	Pregnancy	Infancy	Toddlerhood
<b>Percent of Clients Visited at various Locations:</b>						
Client's home	94%	98%	98%	95%	98%	98%
Family/friend's home	16%	28%	21%	13%	22%	17%
Doctor/clinic	8%	11%	6%	7%	9%	6%
School	4%	5%	4%	5%	4%	3%
Employment	3%	6%	6%	2%	3%	3%
Other	23%	44%	39%	18%	32%	25%

## Content of Home Visits

The content of the home visitation program is based upon the visit-to-visit guidelines that are designed to promote knowledge and skills in the five domains of maternal, child, and family functioning. The proportion of visit time spent on each of these five domains varies depending on the developmental stages and challenges most families encounter during pregnancy, infancy (0 to 12 months), and toddlerhood (13 to 24 months). During the pregnancy phase of the program, the client's health is of primary concern. After the baby is born, the focus shifts to parenting through development of the maternal role while continuing to emphasize and plan for the client's future through time spent on the other domain areas.

The focus of each home visit is agreed upon by the client and nurse home visitor at the preceding visit to allow for individualization related to the client's and family members' needs. The five program content domains are:

- Personal health of the client
- Environmental health
- Client's life-course development
- Maternal role
- Relationships with friends and family.

Table 15 illustrates the average percentage of time devoted to each of the content domains by phase for Colorado NFP and the national NFP sample, and provides the NFP Objectives.

Table 15. Average Percentage of Visit Time Spent on Program Domains

	Colorado NFP	National NFP	NFP Objective
<b>Pregnancy</b>	<b>n= 16,161</b>	<b>159,508</b>	
Personal health	38%	40%	35-40%
Environmental health	9%	10%	5-7%
Life-course development	12%	13%	10-15%
Maternal role	26%	25%	23-25%
Friends & family	14%	13%	10-15%
<i>Percent of planned content covered</i>	93%	93%	
<b>Infancy</b>	<b>n= 13,638</b>	<b>128,406</b>	
Personal health	16%	17%	14-20%
Environmental health	10%	12%	7-10%
Life-course development	16%	16%	10-15%
Maternal role	44%	42%	45-50%
Friends & family	14%	14%	10-15%
<i>Percent of planned content covered</i>	91%	92%	
<b>Toddlerhood</b>	<b>n= 12,363</b>	<b>112,820</b>	
Personal health	16%	17%	10-15%
Environmental health	10%	12%	7-10%
Life-course development	16%	16%	18-20%
Maternal role	44%	42%	40-45%
Friends & family	14%	14%	10-15%
<i>Percent of planned content covered</i>	91%	92%	

\*The percentages of time devoted to program domains are averages based on all clients who have or should have completed the respective phase and had at least one reported visit during that phase

## Alternative Encounters

Nurse home visitors report information on all encounters with clients and family. Although the most frequent encounter is through home visits, there are times when other encounters (such as telephone contacts) that cover program content occur. Table 16 summarizes this information by phase for both Colorado NFP and NFP clients nationwide.

Table 16. *Alternative Contacts with Clients and Families*

	Colorado NFP			National NFP		
	Pregnancy	Infancy	Toddlerhood	Pregnancy	Infancy	Toddlerhood
Number of participants with alternative contacts	3,797	5,406	2,434	32,138	40,459	16,915
Total number of alternative contacts	8,090	16,821	6,953	72,362	129,663	51,776
Mean number of alternative contacts per client	2.1	3.1	2.9	2.3	3.2	3.1
Range of number of alternative contacts per client	(1-34)	(1-52)	(1-68)	(1-78)	(1-159)	(1-113)
Average time per alternative contact in minutes	13	13	14	16	18	18
<b>Percent of alternative contacts with:</b>						
Client	83%	82%	85%	77%	77%	80%
Husband/partner	0%	0%	0%	0%	0%	0%
Father of Child	1%	1%	1%	1%	1%	1%
Other family member	1%	1%	1%	1%	1%	1%
<b>Time devoted to program domains</b>						
Personal health	54%	26%	22%	58%	28%	25%
Environmental health	7%	7%	9%	12%	9%	13%
Life-course development	16%	15%	20%	13%	15%	24%
Maternal role	13%	41%	34%	14%	44%	36%
Friends & family	13%	14%	19%	10%	11%	13%

*The percentages of time devoted to program domains are averages based on all clients who have or should have completed the respective phase and had at least one reported alternative contact during that phase.*

*Mean and range apply only to clients who have had at least one Alternative Encounter (not all clients)*

## Referral to Services

Nurse home visitors report on the number and type of referrals made to families in the program. This information is collected whenever a referral is made and is shown in Table 17.

Table 17. Client Referrals to Outside Services

	Pregnancy		Infancy				Toddler			
			0-6 months		6-12 months		12-18 months		18-24 months	
<b>Government Assistance</b>										
TANF	1,433	4.6%	986	3.3%	482	3.1%	369	2.9%	238	2.5%
Medicaid - Client	3,169	10.1%	1,894	6.4%	995	6.3%	848	6.7%	604	6.4%
Medicaid - Child	317	1.0%	2,516	8.5%	1,073	6.8%	1,361	10.8%	828	8.7%
Food Stamps	1,786	5.7%	1,155	3.9%	650	4.1%	515	4.1%	365	3.9%
Social Security	64	0.2%	167	0.6%	53	0.3%	35	0.3%	31	0.3%
Unemployment	78	0.2%	44	0.1%	21	0.1%	32	0.3%	15	0.2%
SCHIP**	126	0.4%	92	0.3%	61	0.4%	85	0.7%	71	0.7%
WIC	5,513	17.6%	3,054	10.3%	917	5.8%	759	6.0%	596	6.3%
<b>Crisis Intervention</b>										
Domestic Violence	265	0.8%	300	1.0%	280	1.8%	208	1.6%	135	1.4%
Child Abuse	2	0.0%	21	0.1%	18	0.1%	10	0.1%	10	0.1%
<b>Mental Health Services</b>										
Mental health services	1,732	5.5%	1,963	6.6%	1,236	7.8%	941	7.5%	666	7.0%
Smoking cessation	892	2.8%	204	0.7%	110	0.7%	91	0.7%	54	0.6%
Alcohol abuse	49	0.2%	34	0.1%	21	0.1%	31	0.2%	16	0.2%
Drug abuse	77	0.2%	34	0.1%	28	0.2%	20	0.2%	31	0.3%
<b>Health Care Services</b>										
Client**	1,369	4.4%	1,261	4.3%	455	2.9%	348	2.8%	337	3.6%
Child**	125	0.4%	1,221	4.1%	631	4.0%	582	4.6%	451	4.8%
<b>Developmental Referral**</b>										
Client**	75	0.2%	103	0.3%	64	0.4%	51	0.4%	100	1.1%
Child**	-	-	-	-	-	-	-	-	-	-
<b>Education</b>										
GED/Alternative HS**	819	2.6%	777	2.6%	445	2.8%	345	2.7%	228	2.4%
Education beyond HS**	331	1.1%	499	1.7%	435	2.8%	365	2.9%	322	3.4%
<b>Other Services</b>										
Child care	541	1.7%	1,322	4.5%	805	5.1%	609	4.8%	485	5.1%
Job training	764	2.4%	703	2.4%	550	3.5%	389	3.1%	293	3.1%
Housing	2,430	7.8%	1,502	5.1%	1,003	6.4%	804	6.4%	521	5.5%
Transportation	397	1.3%	256	0.9%	116	0.7%	66	0.5%	46	0.5%
Injury prevention	1,047	3.3%	661	2.2%	719	4.6%	359	2.8%	196	2.1%
Childbirth education	3,868	12.3%	26	0.1%	12	0.1%	7	0.1%	15	0.2%
Lactation services**	762	2.4%	1,472	5.0%	53	0.3%	19	0.2%	20	0.2%
Charitable services**	1,825	5.8%	1,334	4.5%	821	5.2%	649	5.1%	472	5.0%
Legal services**	439	1.4%	652	2.2%	517	3.3%	398	3.2%	350	3.7%
Other	8,140	26.0%	6,707	22.6%	3,942	25.0%	3,042	24.1%	2,412	25.5%

\*The numbers (n) represent the number of referrals made to a specific type of service. The percentages represent the distribution of referrals among different services.

\*\* Data Collection began for this October 2006.

-- No longer asked



Table 18. Client Referrals to Outside Services Overall

	Colorado NFP	National NFP
Percent of clients receiving at least one referral	78.0%	57.2%
Average number of referrals per client	6.0	6.2

### Reasons Clients Dropped from the Program

There are many reasons why clients may leave the program prior to their child's second birthday. These reasons and the percent of clients leaving the program are noted in Table 19, Table 20 and Table 21 below.

On October 1, 2006, NFP programs began collecting more detailed data on reasons for attrition, including all the reasons listed below under "Declined Participation". Because data collection for these items began at a later time point, the percentages of clients leaving the program for these reasons may appear smaller when looking at cumulative data. (Those clients who have not received any visits or telephone encounters for more than 180 days are also considered to have dropped from the program.)

For comparison purposes, attrition rates for the national NFP sample by phase are also provided. Retention of clients is a common problem for all prevention programs. All NFP implementing agencies are encouraged to strive for rates of 10% or less during pregnancy, 20% or less during infancy, and 10% or less during the toddler phase. Please see Appendix B for more information on the objectives for attrition.

Table 19. Client Attrition during Pregnancy

	Colorado NFP		National NFP	
	16,003		157,020	
<b>Pregnancy (n=)*</b>				
Miscarriage / fetal death	250	1.6%	2,810	1.8%
Moved out of service area	691	4.3%	5,300	3.4%
Unable to locate	360	2.2%	5,214	3.3%
Excessive missed visits	122	0.8%	2,956	1.9%
Maternal death	1	0.0%	13	0.0%
Unable to serve	17	0.1%	242	0.2%
Declined participation** (prior to 10/1/2006)	313	2.0%	3,784	2.4%
<b>Declined participation for one of the following reasons†:</b>				
Returned to work or school	59	0.4%	653	0.4%
Pressure from family members	36	0.2%	309	0.2%
Refused new nurse	21	0.1%	303	0.2%
Dissatisfied with the program	26	0.2%	219	0.1%
Client received what she needs from the program or receiving services from another program	109	0.7%	1,074	0.7%
Client incarcerated / out of home placement	2	0.0%	22	0.0%
Other	0	0.0%	0	0.0%
No visits for > 180 days	60	0.4%	1,067	0.7%
Agency Closure	0	0.0%	32	0.0%
Child no longer in familial custody	1	0.0%	13	0.0%
Nurse resigned and no room in other caseloads	0	0.0%	45	0.0%
Safety of the nurse	2	0.0%	25	0.0%
Unable to accommodate the client's requested schedule	6	0.0%	79	0.1%
<b>Total attrition during pregnancy</b>	<b>2,076</b>	<b>13.0%</b>	<b>241,60</b>	<b>15.4%</b>

\*n equals clients who have started the phase v\*\*This reason contains only data through September 30, 2006

†Data collection began October 1, 2006 for the nine categories under Declined Further Participation. Pregnancy phase includes intake to birth

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Table 20. Client Attrition during Infancy

	Colorado NFP		National NFP	
<b>Infancy (n=)*</b>	<b>14,440</b>		<b>138,006</b>	
Infant death	75	0.5%	648	0.5%
Moved out of service area	1,780	12.3%	9,896	7.2%
Unable to locate	1,005	7.0%	11,293	8.2%
Excessive missed visits	351	2.4%	7,404	5.4%
Maternal death	3	0.0%	32	0.0%
Unable to serve	40	0.3%	535	0.4%
Declined participation** (prior to 10/1/2006)	600	4.2%	6,492	4.7%
<b>Declined participation for one of the following reasons†:</b>				
Returned to work or school	261	1.8%	2,044	1.5%
Pressure from family members	41	0.3%	228	0.2%
Refused new nurse	113	0.8%	1,217	0.9%
Dissatisfied with the program	16	0.1%	135	0.1%
Client received what she needs from the program or receiving services from another program	261	1.8%	2,064	1.5%
Client incarcerated / out of home placement	10	0.1%	61	0.0%
Other	0	0.0%	1	0.0%
No visits for > 180 days	117	0.8%	3,140	2.3%
Agency Closure	0	0.0%	168	0.1%
Child no longer in familial custody	84	0.6%	668	0.5%
Nurse resigned and no room in other caseloads	1	0.0%	85	0.1%
Safety of the nurse	2	0.0%	26	0.0%
Unable to accommodate the client's requested schedule	6	0.0%	60	0.0%
<b>Total attrition during infancy</b>	<b>4,766</b>	<b>33.0%</b>	<b>46,197</b>	<b>33.5%</b>

\*n equals clients who have started the phase

\*\*This reason contains only data through September 30, 2006

†Data collection began October 1, 2006 for the nine categories under Declined Further Participation

Infancy phase includes birth through 11 months

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Table 21. Client Attrition during Toddlerhood

	<i>Colorado NFP</i>		<i>National NFP</i>	
<b>Toddler (n=)*</b>	<b>12,710</b>		<b>117,695</b>	
Toddler death	6	0.0%	121	0.1%
Moved out of service area	780	6.1%	3,926	3.3%
Unable to locate	575	4.5%	5,396	4.6%
Excessive missed visits	189	1.5%	3,426	2.9%
Maternal death	2	0.0%	68	0.1%
Unable to serve	14	0.1%	339	0.3%
Declined participation** (prior to 10/1/2006)	199	1.6%	2,548	2.2%
<b>Declined participation for one of the following reasons†:</b>				
Returned to work or school	158	1.2%	1,035	0.9%
Pressure from family members	6	0.0%	97	0.1%
Refused new nurse	93	0.7%	885	0.8%
Dissatisfied with the program	5	0.0%	74	0.1%
Client received what she needs from the program or receiving services from another program	100	0.8%	757	0.6%
Client incarcerated / out of home placement	7	0.1%	68	0.1%
Other	1	0.0%	43	0.0%
No visits for > 180 days	90	0.7%	3,497	3.0%
Agency Closure	1	0.0%	228	0.2%
Child no longer in familial custody	43	0.3%	389	0.3%
Nurse resigned and no room in other caseloads	1	0.0%	104	0.1%
Safety of the nurse	1	0.0%	48	0.0%
Unable to accommodate the client's requested schedule	2	0.0%	69	0.1%
<b>Total attrition during toddlerhood</b>	<b>2,243</b>	<b>17.6%</b>	<b>22,113</b>	<b>18.8%</b>

\*n equals clients who have started the phase

\*\*This reason contains only data through September 30, 2006

†Data collection began October 1, 2006 for the nine categories under Declined Further Participation

Toddler phase includes 12 through 24 months

## Program Risk Factors and Outcomes

An important part of this program is improving the health and wellbeing of the clients and children enrolled in the program and monitoring any changes that occur. Various outcomes and risk factors are noted in the tables below.

### Pregnancy Health and Outcomes

Table 22. Client's Health during Pregnancy

	<i>Colorado NFP</i>	<i>National NFP</i>
<b>Percent with first prenatal visit with Health Care provider in:</b>		
1st Trimester	84%	86%
2nd Trimester	14%	13%
3rd Trimester	1%	1%
Percent underweight before pregnancy	17%	16%
Percent with adequate weight gain	79%	74%
<b>Domestic violence</b>		
Physically abused	8%	7%
Forced to have sexual relations	3%	3%
Afraid of partner / someone else	7%	4%

*Underweight is a BMI of less than or equal to 18.5*

*Adequate weight gain is defined as 25 lbs.*

Table 23. Government Assistance Use during Pregnancy

	<i>Colorado NFP</i>	<i>National NFP</i>
Percent receiving Medicaid during pregnancy*	81%	83%

*\*Data collection began October 1, 2006*

### Change in Maternal Health Behaviors

Prenatal use of tobacco, alcohol and other drugs has been associated with various adverse birth outcomes such as low birth weight, preterm delivery, and spontaneous abortion. Assessments of personal health habits, including smoking and the use of alcohol, are conducted periodically: shortly after enrollment, at 36 weeks of pregnancy, and at 12 months of infancy. Because health habits are measured at different time periods, it is possible to consider changes in these behaviors as intervening outcomes.

Cigarette use is defined as “one or more cigarettes in the previous 48 hours.” For all other substances, use is defined as “one or more times over the previous 14 days.”

Table 24 provides information about the maternal health habits of Colorado NFP clients between intake and 36 weeks of pregnancy and between intake and one year infancy with information being compared for those with data at *both* time points. As is common for programs addressing substance use during pregnancy, a client may return to previous substance use or other detrimental health habits after the birth of her baby. It is not feasible to examine change in behavior over time if that behavior is underreported at intake. An additional consideration is the likelihood of increased reporting by the client as the relationship with the nurse home visitor develops. This can result in an apparent increase when in fact the use at intake was underreported. Please note that the relative percent change cannot be calculated when no participants reported a certain health habit at intake.

Table 24. Change in Maternal Health Habits among **Colorado NFP** Clients: Program Intake and 36 weeks of Pregnancy, Program Intake and 12 Months of Infancy

<b>Pregnancy</b>	<b>N</b>	<b>Frequency of client behavior at intake</b>	<b>Frequency of client behavior at 36 weeks of pregnancy</b>	<b>Percent changed</b>
Cigarette smoker	11,096	1,411	1,119	-21%
Marijuana use	11,125	241	90	-63%
Alcohol use	11,119	239	162	-32%
Cocaine use	11,121	10	3	-70%
Other drug use	11,113	8	5	-38%
<b>Infancy</b>	<b>N</b>	<b>Frequency of client behavior at intake</b>	<b>Frequency of client behavior at infancy</b>	<b>Percent changed</b>
Cigarette smoker	6,274	755	1,241	64%
Marijuana use	6,303	125	172	38%
Alcohol use	6,304	159	1,313	726%
Cocaine use	6,300	3	10	233%
Other drug use	6,295	7	7	0%

Based on the number of clients who answered the question at both time points

Table 25 presents this maternal health habit data for NFP clients nationwide.

Table 25. Change in Maternal Health Habits among **National NFP** Clients: Program Intake and 36 Weeks of Pregnancy, Program Intake and 12 Months of Infancy

<b>Pregnancy</b>	<b>N</b>	<b>Frequency of client behavior at intake</b>	<b>Frequency of client behavior at 36 weeks of pregnancy</b>	<b>Percent changed</b>
Cigarette smoker	90,132	11,658	9,825	-16%
Marijuana use	82,272	1,248	533	-57%
Alcohol use	91,737	1,116	811	-27%
Cocaine use	82,167	69	54	-22%
Other drug use	82,145	81	65	-20%
<b>Infancy</b>	<b>N</b>	<b>Frequency of client behavior at intake</b>	<b>Frequency of client behavior at infancy</b>	<b>Percent changed</b>
Cigarette smoker	40,219	5,020	8,395	67%
Marijuana use	40,869	569	970	70%
Alcohol use	41,312	538	6,182	1049%
Cocaine use	40,728	27	41	52%
Other drug use	40,715	49	51	4%

Based on the number of clients who answered the question at both time points

## Change in Experience of Violence

Data on violence are collected from clients at program intake and at 36 weeks of pregnancy. Change in the experience of physical abuse and in fear of a partner or other individual are presented in Table 26. Violence data are based on self-reported information which may not be divulged until the nurse/client relationship has developed and is more trusting. The potential underreporting of this information should be considered when looking at changes in violence rates over time.

*Table 26. Change in the Experience of Violence between Program Intake and 36 Weeks of Pregnancy*

	<i>N</i>	<i>Frequency of client behavior at intake</i>	<i>Frequency of client behavior at 36 weeks of pregnancy</i>	<i>Percent changed</i>
<b>Colorado NFP</b>				
Physical abuse	10,468	259	132	-49%
Fear of partner / other	10,424	474	240	-49%
<b>National NFP</b>				
Physical abuse	75,858	2,203	1376	-38%
Fear of partner / other	77,332	2,787	1436	-48%

*The percent change calculation was modified and is now based on question #11 at Pregnancy Intake and question #2 at 36 Weeks pregnancy instead of the entire form.*

## Infant Health Outcomes

### Birth Outcomes – Preterm Births and Low Birth Weight

Gestational age and weight at birth are measures of infant health, with birth before 37 weeks gestation considered preterm, and weight less than 2,500 grams considered low birth weight.

#### Preterm Births

Reduction of preterm births is considered the best way to reduce infant illness, disability and death.<sup>8</sup> Table 27 illustrates the rates of preterm births for Colorado NFP and the national NFP sample, and provides NFP Objectives.

The NFP Objective for preterm births is consistent with the target goal set in Healthy People 2020 Objectives<sup>8</sup> for the percentage of preterm births among all women of childbearing age. Whereas it is a national goal to eliminate disparities in health outcomes among populations, health statistics for women from minority and low income populations served by the NFP substantiate the existence of disparities in rates of preterm and low birth weight infants by race and ethnicity. Thus, the progress that NFP Implementing Agencies can realistically achieve toward the goals may vary based on the racial composition of the population served. To help Implementing Agencies monitor their progress toward the longer term target goal for 2020, we have established intermediate objectives for NFP implementing agencies that reflect the racial/ethnic distribution of the NFP clients served (see Appendix B). Table 27 also illustrates the rate(s) of preterm births for the predominant racial and ethnic group(s) within Colorado NFP.

Table 28 illustrates the rates of preterm births based on the client's age at the time of her infant's birth.

Table 27. Percentage of Preterm Infants by Client's Race and Ethnicity

<i>Client's Race/Ethnicity</i>	<i>Colorado NFP</i>	<i>National NFP</i>	<i>NFP Objective</i>
<b>Total</b>	9.9%	9.8%	11.4%
<b>Ethnicity</b>			
Hispanic or Latina	8.3%	8.3%	
Not Hispanic or Latina	9.4%	9.6%	
Ethnicity declined	13.8%	7.4%	
Ethnicity unknown	31.9%	12.6%	
<b>Race</b>			
White	9.1%	9.1%	
African American / Black	10.1%	10.6%	
Asian	2.9%	7.1%	
Native American / Alaska Native	9.1%	8.6%	
Native Hawaiian / Pacific Islander	0.0%	6.9%	
Multiracial / other	10.7%	7.8%	
Race declined	10.0%	7.8%	
Race unknown	10.6%	10.0%	

*Race and ethnicity data collected prior to 10/20/2010 has been reassigned to newer categories which are not directly comparable. Clients who have been classified as belonging to the old "Hispanic/Latina" racial category are now categorized as having "Hispanic or Latina" Ethnicity, and their race will equal "Missing". Clients formerly classified as "White Non-Hispanic" now show up with a race of White and ethnicity of "Not Hispanic or Latina". Clients previously identified as American Indian, African-American or Asian/Pacific Islander retain the same race but will be reported as ethnicity of "Missing".*

*-- Sample size too small to calculate reliable percentage*

Table 28. Percentage of Preterm Infants by Age of the Client at Infant Birth

<i>Client's Age at Infant Birth</i>	<i>Colorado NFP Preterm Births</i>		<i>National NFP Preterm Births</i>
	<i>Number of Premature Infants by Client's Age</i>	<i>Percent of Preterm Births by Client's Age</i>	<i>Percent of Preterm Births by Client's Age</i>
Less than 15 years	41	13%	12%
15-17 years	279	9%	10%
18-19 years	320	10%	10%
20-24 years	467	11%	11%
25-29 years	172	12%	14%
30 years or older	91	11%	15%

*Includes only clients for whom age at birth can be calculated*

### Low Birth Weight

Birth weight is also used as an indicator of infant health, with the occurrence of infant death and/or disability highly correlated with low birth weight (less than 2,500 grams/5.5 lbs.). Table 29 demonstrates the percentage of low birth weight infants for Colorado NFP and the National NFP sample, and provides NFP Objectives. The overall rate is provided along with the rate(s) for the predominant ethnic group(s) within Colorado NFP. Table 30 illustrates the percentages of low birth weight infants based on the client's age at the time of her infant's birth.

Table 29. Percentage of Low Birth Weight Infants by Client's Race and Ethnicity

	<b>Colorado NFP</b>	<b>National NFP</b>	<b>NFP Objective</b>
<b>Total</b>	9.2%	8.4%	7.8%
<b>Ethnicity</b>			
Hispanic or Latina	8.9%	7.5%	
Not Hispanic or Latina	9.4%	8.7%	
Ethnicity declined	21.1%	9.3%	
Ethnicity unknown	6.9%	8.3%	
<b>Race</b>			
White	9.2%	7.3%	
African American / Black	13.0%	11.7%	
Asian	6.5%	8.9%	
Native American / Alaska Native	5.9%	5.9%	
Native Hawaiian / Pacific Islander	28.6%	10.7%	
Multiracial / other	10.1%	6.9%	
Race declined	11.7%	8.1%	
Race unknown	8.5%	7.7%	

Race and ethnicity data collected prior to 10/20/2010 has been reassigned to never categories which are not directly comparable. Clients who have been classified as belonging to the old "Hispanic/Latina" racial category are now categorized as having "Hispanic or Latina" Ethnicity, and their race will equal "Missing". Clients formerly classified as "White Non-Hispanic" now show up with a race of White and ethnicity of "Not Hispanic or Latina". Clients previously identified as American Indian, African-American or Asian/Pacific Islander retain the same race but will be reported as ethnicity of "Missing".

-- Sample size too small to calculate reliable percentage

Table 30. Percentage of Low Birth Weight Infants by Age of the Client at Infant Birth

<b>Client's Age at Infant Birth</b>	<b>Colorado NFP Low Birth Weight (&lt;2500 g) Infants</b>		<b>National NFP Low Birth Weight (&lt;2500 g) Infants</b>
	<b>Number of Premature Infants by Client's Age</b>	<b>Percent of Preterm Births by Client's Age</b>	<b>Percent of Preterm Births by Client's Age</b>
Less than 15 years	31	10%	10%
15-17 years	285	10%	9%
18-19 years	334	11%	10%
20-24 years	433	10%	10%
25-29 years	148	11%	11%
30 years or older	100	12%	14%

Includes only clients for whom age at birth can be calculated

Low birth weight is highly correlated with certain adverse infant health outcomes and a greater use of resources immediately following delivery. Those infants with marginal low birth weight (2,268 – 2,500 grams/5.0-5.5 lbs.) use fewer resources and are at less risk for future health problems than infants below five pounds (less than 2,268 grams). Table 31 provides the percentage of low birth weight infants who were of marginal low birth weight.



Table 31. Other Infant Health Characteristics

	Colorado NFP	National NFP
Percentage of LBW Infants who were 5.0-5.5 lbs	44%	38%
Percentage of LBW Infants who were less than 5.0 lbs	56%	62%

### Developmental Delays

The Ages and Stages Questionnaire (ASQ) and the Ages and Stages Questionnaire: Social-Emotional (ASQ-SE) is administered at several time points during the child's first two years. Scores on these assessments will provide the nurse home visitor with a framework for monitoring or referring the child for further evaluation. Children who are identified as having a developmental or physical delay are not subsequently assessed. Collection of this data began in October 2006. It is important to note that ASQ scores are entered into ETO on a delayed basis: the 4-month scores are added to the 6-month data collection form, resulting in a slight lag in data entry.

Table 32. Ages and Stages

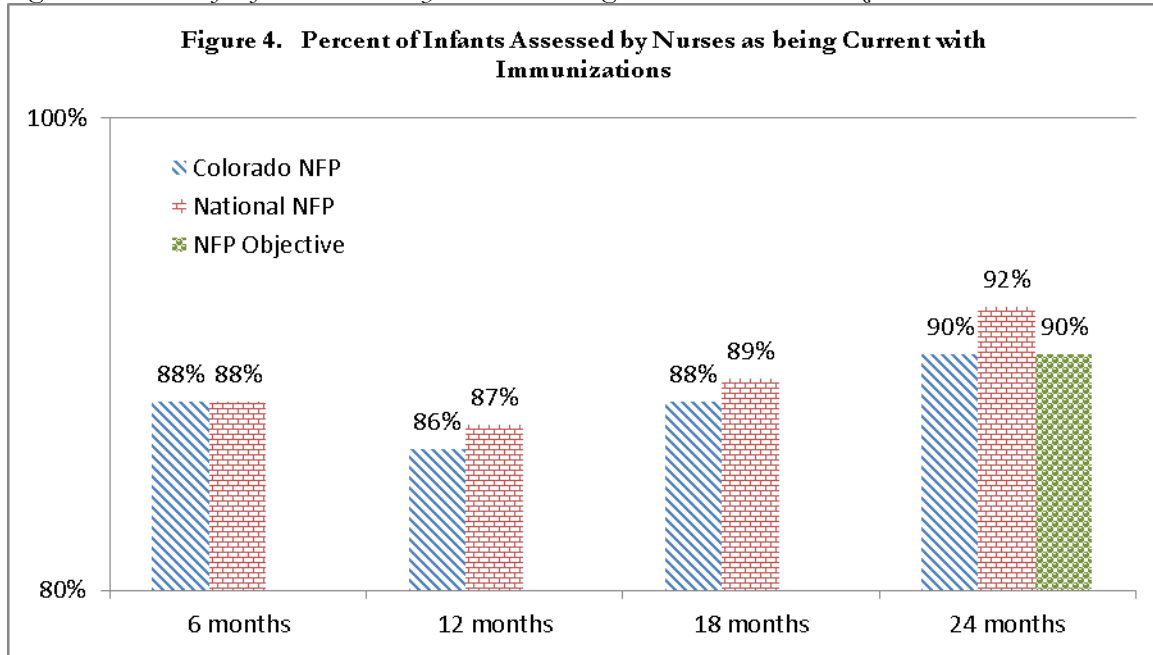
ASQ								
	4 months		10 months		14 months		20 months	
Children who were assessed	5,282	96%	4,284	95%	3,505	96%	3,138	95%
<b>Children needing a referral (total)</b>	291	6%	402	9%	147	4%	210	7%
Communication	41	1%	31	1%	29	1%	113	4%
Gross motor	166	3%	280	7%	87	2%	35	1%
Fine motor	59	1%	77	2%	19	1%	64	2%
problem solving	55	1%	73	2%	30	1%	29	1%
Personal-social	66	1%	37	1%	22	1%	42	1%
ASQ-SE								
	6 months		12 months		18 months		24 months	
Children who were assessed	4,910	89%	4,013	89%	3,279	90%	2,970	89%
Children needing referral	127	3%	86	2%	112	3%	82	3%

Data collection began with children who were born after October 1, 2006.

## Immunizations

Figure 4 provides a summary of the percentages of Colorado NFP infants fully immunized at 6, 12, 18 and 24 months of age based on locally recommended immunization schedules. Rates are provided for the Colorado NFP children, the national NFP sample, and the NFP Objective for 24 months.

Figure 4. Percent of Infants Assessed by Nurses as being Current with Immunizations



Because of a revision in the immunization data collection question, only data collected since October 1, 2006 is included in this figure.

## Lead Testing

Information on lead tests for infants and toddlers in the program, as well as the results of that testing, is collected at 6, 12, 18 and 24 months of age. The percentage of children of a certain age who have been tested is noted in the table below, as is the percentage of those children who tested positive for lead poisoning.

Table 33. Lead Testing by Child Age

	6 months		12 months		18 months		24 months	
<b>Children tested for lead exposure</b>								
Colorado NFP	216	2.6%	1,134	17.3%	1,666	32.5%	1,752	39.0%
National NFP	2,330	3.7%	12,745	26.5%	17,573	50.4%	17,556	56.7%
<b>Positive Result</b>								
Colorado NFP	6	2.8%	24	2.1%	28	1.7%	24	1.4%
National NFP	48	2.1%	318	2.5%	432	2.5%	395	2.2%

## Breastfeeding

Figure 5 illustrates breastfeeding rates reported at 6, 12, 18 and 24 months of infant age for the Colorado NFP sample along with rates reported among NFP clients nationwide. Breast milk is considered the ideal form of infant nutrition, with the practice of breastfeeding demonstrating wide-ranging benefits for infants' general health, immune systems, and development<sup>7</sup>. Table 34 presents information on exclusive breastfeeding.

Figure 5. Occurrence of Breastfeeding 2013

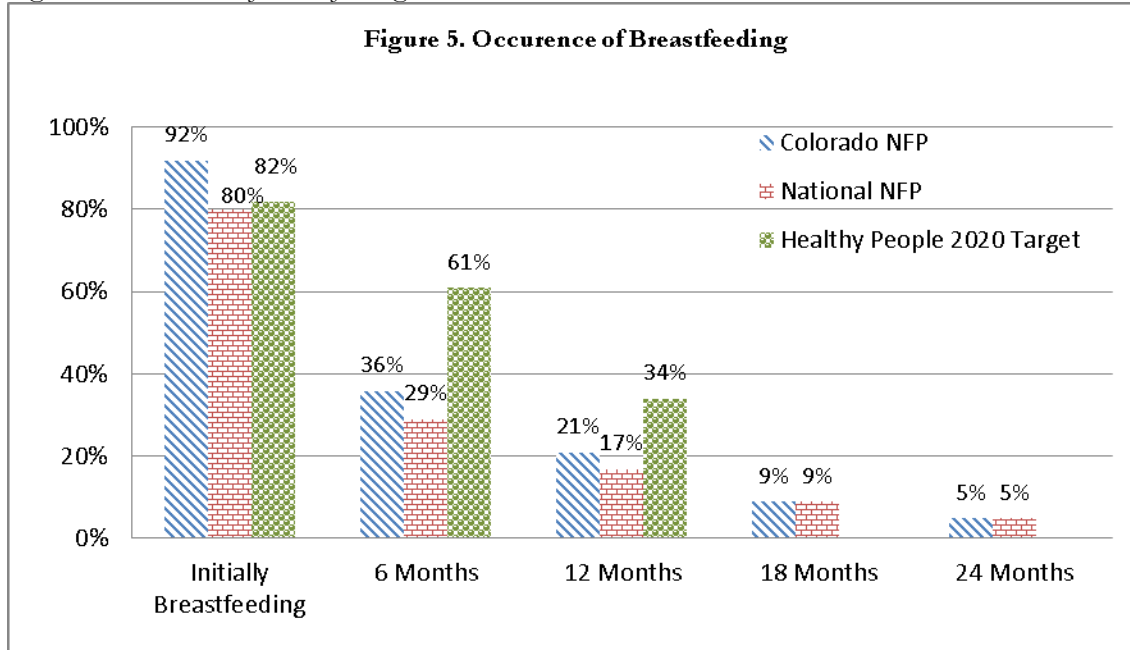


Table 34. Exclusive Breastfeeding<sup>†</sup>

	Colorado NFP	National NFP
Median age when infant no longer exclusively breastfed*	8 weeks	4 weeks
Percent of infants exclusively breastfed until at least 6 months	7%	5%

<sup>†</sup> Data collected beginning October 1, 2006.

\*As reported at 6 months

## Maternal Life Course Development

### Subsequent Pregnancies

The NFP focuses on helping clients achieve life course developmental goals through the planning of future pregnancies, completion of their education, procurement of employment, and development of stable partner relationships. The timing and number of subsequent pregnancies has important implications for a client's ability to stay in school, find work, and/or find appropriate child care.

Figure 6 indicates rates of subsequent pregnancies among Colorado NFP, the national NFP and the NFP Objective by 24 months after the birth of the first child.

Figure 6. Subsequent Pregnancies by 6, 12, 18 and 24 months Postpartum

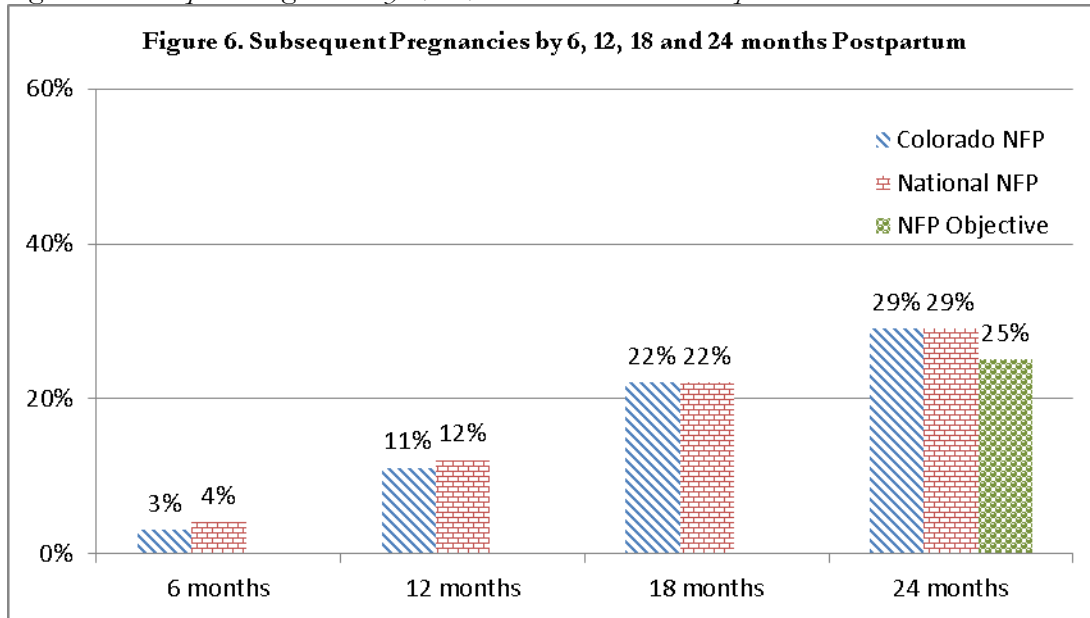


Table 35. Subsequent Pregnancies by 12 and 24 Months Postpartum by Age of the Client at Enrollment

	Subsequent Pregnancies by 1 Year Postpartum				Subsequent Pregnancies by 2 years Postpartum			
	Colorado NFP		National NFP		Colorado NFP		National NFP	
Less than 15 years	5	3%	149	7%	18	16%	257	22%
15-17 years	187	10%	1,904	10%	338	30%	2,973	30%
18-19 years	263	12%	2,245	12%	402	33%	3,266	33%
20-24 years	271	9%	2,228	10%	535	29%	3,685	28%
25-29 years	62	6%	500	7%	166	25%	1,071	24%
30 years or older	45	7%	220	6%	95	23%	455	20%

### Education

Education status and enrollment in school are also factors to consider when looking at clients' life course development. Nurse home visitors work with clients to set educational and career goals, including completion of a high school diploma or GED. Table 36 tracks those clients who entered the program *without* a high school diploma or GED in terms of diploma/GED completion and school enrollment. Table 37 provides this information for national NFP clients.

Table 36. Education Status over Time for **Colorado NFP** Clients with No High School Diploma or GED at Intake

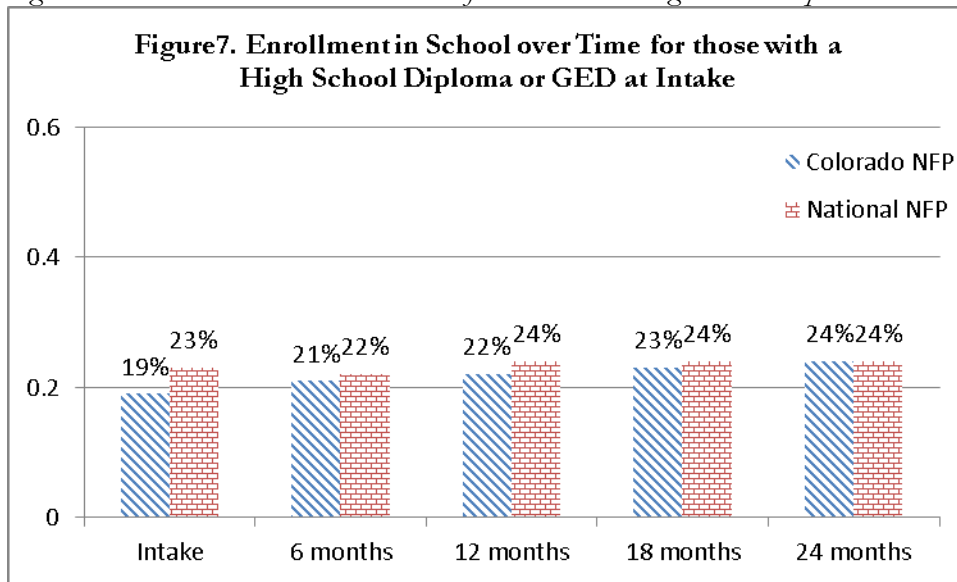
	Intake	6 months	12 months	18 months	24 months
<b>n=</b>	7,158	3,732	2,916	2,231	1,939
Diploma/GED and enrolled in school	0%	5%	8%	10%	14%
Diploma/GED but not enrolled in school	0%	12%	18%	23%	26%
No diploma/GED and enrolled in school	45%	34%	27%	22%	17%
No diploma/GED but not enrolled in school	47%	42%	42%	40%	39%

Table 37. Education Status over Time for **National NFP** Clients with No High School Diploma or GED at Intake

	Intake	6 months	12 month	18 months	24 months
n=	75,138	30,999	23,283	16,616	14,509
Diploma/GED and enrolled in school	0%	6%	9%	12%	14%
Diploma/GED but not enrolled in school	0%	13%	18%	22%	26%
No diploma/GED and enrolled in school	53%	37%	30%	24%	19%
No diploma/GED but not enrolled in school	37%	35%	35%	34%	33%

Figure 7 tracks enrollment in school beyond high school for those clients who entered the program with a high school diploma or GED.

Figure 7. Enrollment in School over Time for those with a High School Diploma or GED at Intake



### Workforce Participation

Participation in the workforce is another area that is tracked as an indicator of the client's life course development. Figure 8 and Figure 9 note the percentage of clients in the workforce over time broken down by age for both Colorado NFP and the national NFP.

Figure 8. Percentage Working over Time among those 18 Years or Older at Intake

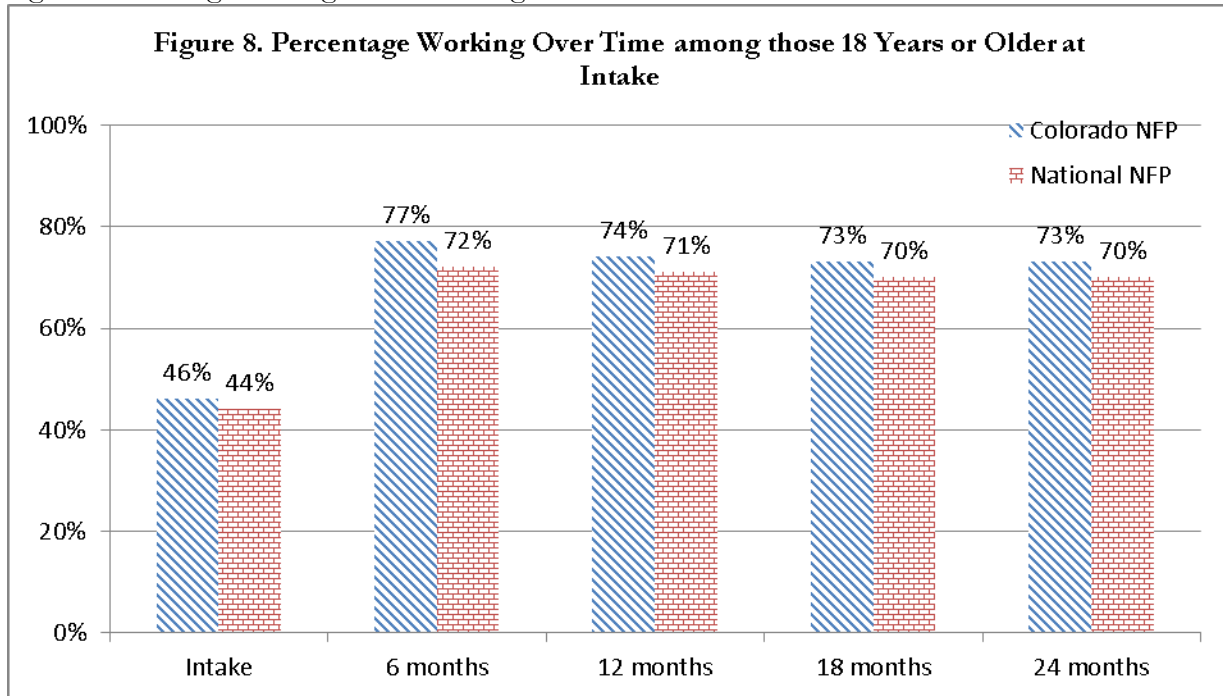
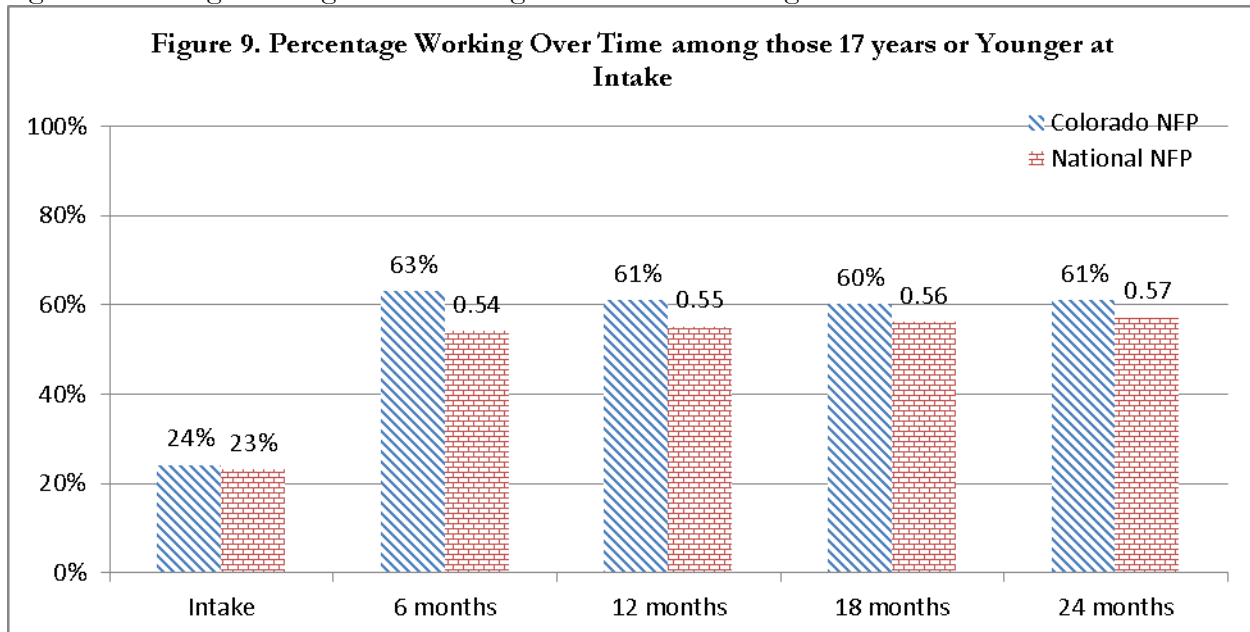
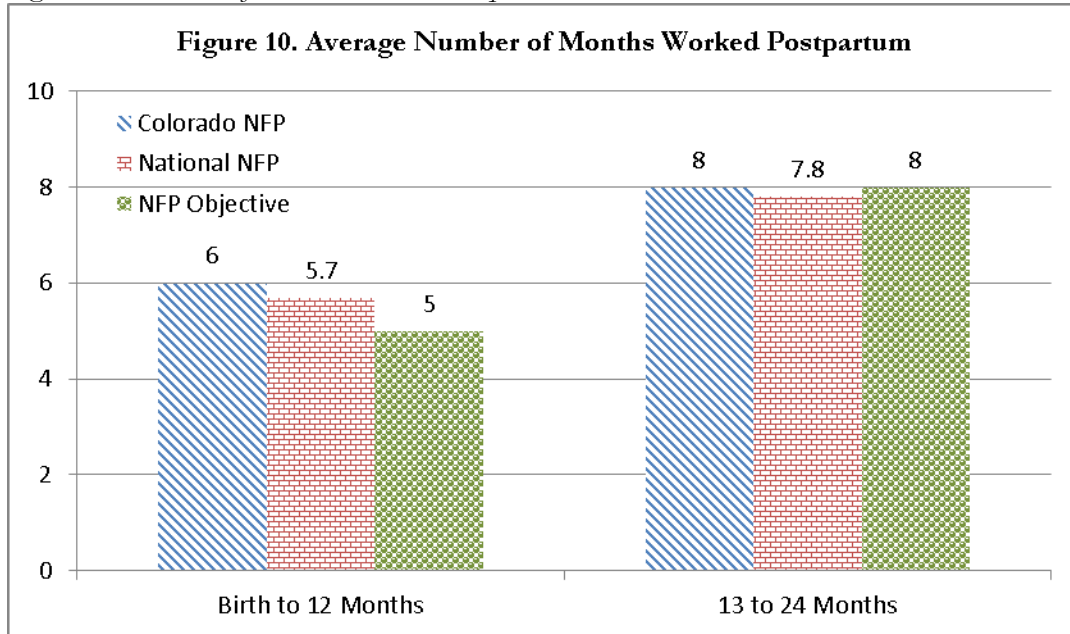


Figure 9. Percentage Working over Time among those 17 Years or Younger at Intake



For those clients who reported working at 12 and 24 months of infant age, the number of months they worked during the first (0-12 months) and second (13-24 months) postpartum years is tracked. The average number of months Colorado NFP clients worked is noted in Figure 10, along with the national NFP rates and NFP Objectives.

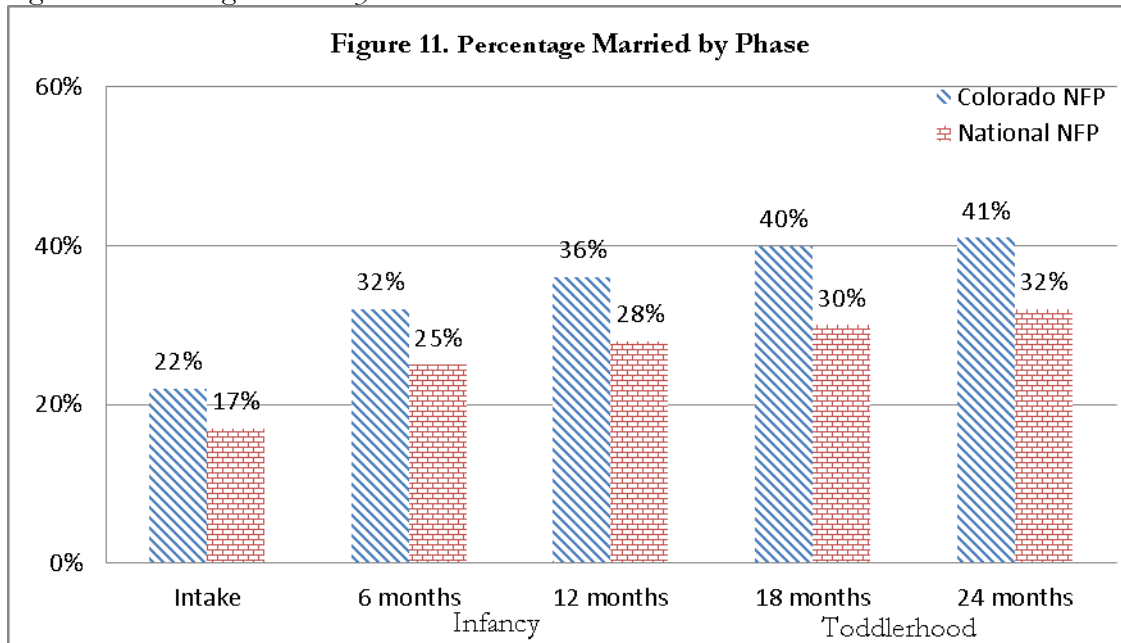
Figure 10. Number of Months Worked Postpartum



### Marital Status

Marital Status of clients is assessed at program intake and every six months after the birth of the client's baby. Marriage is an important indicator of stable partner relationships which have important benefits for the family's economic and psychological health. Figure 11 demonstrates the percentage of clients who were married from intake to 24 months of infant age.

Figure 11. Percentage Married by Phase

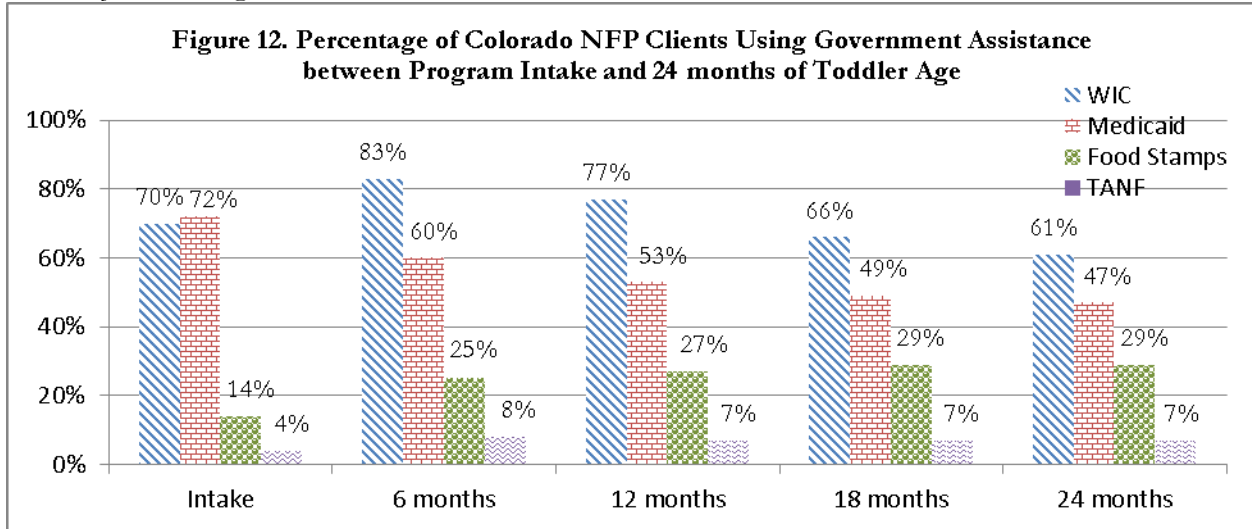




**Use of Government Assistance Programs**

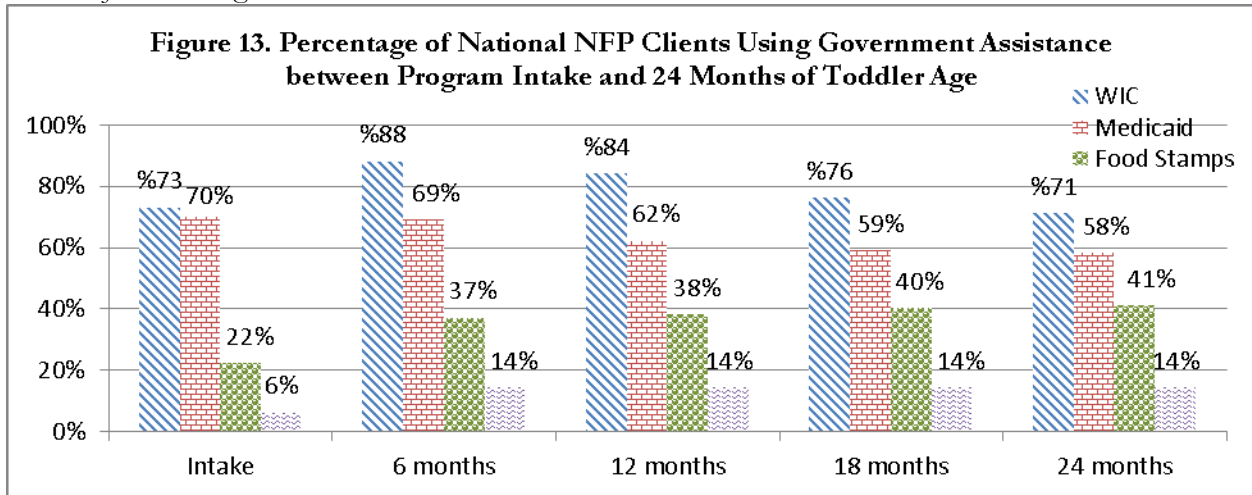
Colorado NFP clients were asked to report their use of publicly supported government assistance programs at intake and at 6, 12, 18 and 24 months of child age. This information is presented in Figure 12 below and rates for NFP clients nationwide are provided in Figure 13.

Figure 12. Percentage of **Colorado NFP** Clients Using Government Assistance between Program Intake and 24 Months of Toddler Age



\* Medicaid use is reported for client only

Figure 13. Percentage of **National NFP** Clients Using Government Assistance between Program Intake and 24 Months of Toddler Age



\* Medicaid use is reported for client use only



## References

1. Olds, D., Henderson, Jr., C., Kitzman, H., Eckenrode, J., Cole, R., & Tatelbaum, R. The promise of home visitation: The results of two randomized trials. *Journal of Community Psychology*. 1998;26:5-21.
2. Olds, D.L., Eckenrode, J., Henderson, Jr., C.R., Kitzman, H., Powers, J., Cole, R., Sidora, K., Morris, P., Pettitt, L.M., & Luckey, D. Long-term effects of home visitation on maternal life course and child abuse and neglect: Fifteen-year follow-up of a randomized trial. *JAMA (Journal of American Medicine)*. 1997;278:637-643.
3. Olds, D., Henderson, Jr., C.R., Cole, R., Eckenrode, J., Kitzman, H., Luckey, D., Pettitt, L.M., Sidora, K., Morris, P., & Powers, J. Long-term effects of nurse home visitation on children's criminal and antisocial behavior: 15-year follow-up of a randomized trial. *JAMA (Journal of American Medicine)*. 1998; 280:1238-1244.
4. Kitzman, H., Olds, D.L., Henderson, Jr., C.R., Hanks, C., Cole, R., Tatelbaum, R., McConnochie, K.M., Sidora, K., Luckey, D.W., Shaver, D., Engelhardt, K., James, D., & Barnard, K. Effect of prenatal and infancy home visitation by nurses on pregnancy outcomes, childhood injuries, and repeated childbearing: A randomized controlled trial. *JAMA (Journal of American Medicine)*. 1997;278: 644-652.
5. Olds, D., Henderson, Jr., C., Phelps, C., Kitzman, H., & Hanks, C. Effects of prenatal and infancy nurse home visitation on government spending. *Medical Care*. 31: 155-174 February 1993.
6. Karoly, L.A., Greenwood, P.W., Everingham, SS., Hoube, J., Kilburn, M.R., Rydell, C.P., Sanders, M., & Chiesa, J. Investing in Our Children: What We Know and Don't Know About the Costs and Benefits of Early Childhood Interventions. Rand Corporation, 1998.
7. U.S. Department of Health and Human Services. Healthy People 2020: Objectives, Early and Middle Childhood (EMC-1) Washington, DC: <http://www.healthypeople.gov/2020/topicsobjectives2020/default.aspx>.
8. Fenson, L., Pethick, S., Renda, C., & Cox, J.L. (2000). Short-form versions of the MacArthur Communicative Development Inventories, *Applied Psycholinguistics*, 21, 95-115.
9. Moore, Kristin Anderson, Jekielek, Susan M., and Emig, Carol. Marriage from a Child's Perspective: How Does Family Structure Affect Children, and What Can We Do about It? Annie E. Casey Foundation *Research Brief*, June 2002.

## Appendix A: Nurse-Family Partnership Overview

Federal, state, and local governments and a variety of private efforts have attempted for several decades to create interventions that would prevent or at least reduce the incidence of low birth weight and preterm infants, child abuse and neglect, crime, welfare dependency, and other severe social and health problems. These attempts included several models of nurse home visitor programs and some programs based in the social welfare system. Our society, nonetheless, still faces persistent rates of child and family poverty, births to adolescents, infant mortality, and juvenile crime. Many of these problems can be traced directly to the behavior of mothers and fathers and conditions in the family home.

One program of prenatal and infancy home visitation by nurses, the Nurse-Family Partnership, developed and tested by Dr. David Olds and colleagues, addresses many of the programmatic and clinical deficiencies found in programs tested earlier. Clinical trials of this program in Elmira, New York; Memphis, Tennessee; and Denver, Colorado have produced a variety of positive outcomes for low-income clients and their children.<sup>1-6</sup>

### The Program Model

NFP nurse home visitors work with women and their families in their homes during pregnancy and through the first two years of the child's life to accomplish three goals:

- Improve pregnancy outcomes by helping women alter their health-related behaviors, including reducing use of cigarettes, alcohol, and illegal drugs,
- Improve child health and development by helping parents provide more responsible and competent care for their children, and
- Improve families' economic self-sufficiency by helping parents develop a vision for their own future, plan future pregnancies, continue their education and find work.

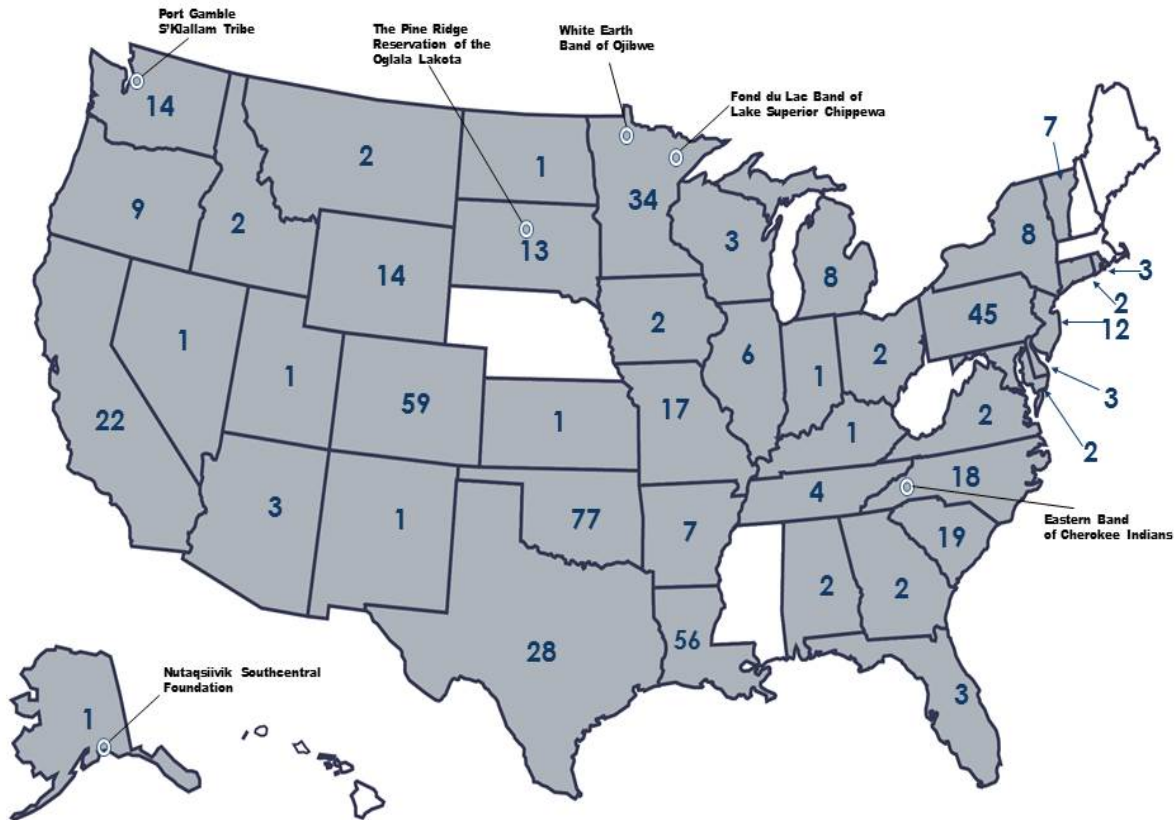
The model being replicated has a number of key features that differentiate it from other home visitation programs:

- A firm foundation in theories of development and behavioral change and methods to reduce specific risks for poor maternal and child outcomes,
- Focus on low-income women bearing first children,
- A clinical foundation in health,
- Use of registered nurses with bachelor degrees,
- Initiation of visits during pregnancy and continuing involvement with families for two years postpartum, and
- Use of detailed visit-by-visit protocols to guide the nurses in their work with families.

## Dissemination of the Nurse-Family Partnership

The NFP is working with communities to implement this program across the country. The map below highlights the states with active NFP programs and the number of counties served in those states. As of July 2013, Nurse-Family Partnership programs are in 43 states, the U.S. Virgin Islands and in more than 520 counties. NFP also serves 7 Tribal Nations. Additional information about the Nurse-Family Partnership can be found on the website at <http://www.nursefamilypartnership.org>

Current NFP Counties as of July 31, 2013



## Appendix B: Nurse-Family Partnership Objectives

Nurse-Family Partnership objectives help implementing agencies track fidelity to the NFP program model and monitor outcomes related to common indicators of maternal, child, and family functioning. The objectives are drawn from the program's research trials, early dissemination experiences, and current national health statistics (e.g., National Center for Health Statistics, Centers for Disease Control and Prevention; Healthy People 2020). The objectives provide guidance for quality improvement efforts and are long-term targets for implementing agencies to achieve over time.

These are the first iteration of objectives for guiding program performance. The National Service Office will continue to review national trends emerging in Efforts to Outcomes (ETOTM), as well as changes in national indicators of relevant maternal, child, and family functioning, to identify areas where the objectives may need to be modified. Equally important will be implementing agencies' own experiences in working with the objectives. Actual experience will inform any updates to the objectives so that they will be useful in improving performance of the NFP model, both nationally and in every implementing agency.

### Objectives Concerning Fidelity to Program Model

#### Program is reaching the intended population of low-income, first-time clients:

1. 75% of eligible referrals are enrolled in the program.
2. 100% of enrolled women are first-time clients (no previous live birth).
3. 60% of pregnant women are enrolled by 16 weeks gestation or earlier.

#### Program attains overall enrollment goal and recommended caseload:

4. A caseload of 25 for all full-time nurses within 8-9 months of program operation.

#### Program successfully retains clients in program through child's second birthday:

5. Cumulative program attrition is 40% or less through the child's second birthday.
6. 10% or less for pregnancy phase.
7. 20% or less for infancy phase.
8. 10% or less for toddler phase.

Although attrition rates may exceed the target objectives defined above when nurse home visitors are first learning the program model (i.e., initial three year program cycle), we believe that program staff needs to attempt with care to develop strategies to fully engage clients in the program through the child's second birthday. In examining current rates of attrition among our national sample of NFP clients, we note considerable variability among programs, with an overall average of about 65% attrition through the child's second birthday (15% pregnancy, 33% infancy, and 17% toddler). Thus, we have established an intermediate objective of reducing attrition nationally by 12-15% over the next five years.

To encourage progress toward this intermediate goal, we encourage individual implementing agencies to work toward reducing client attrition by 2-3% each year, targeting those reasons why clients drop out of the program early that are likely to be most amenable to change (e.g., declined further participation, missed appointments, failure to notify agency of address changes, etc.)

**Nurse home visitors maintain established frequency, length, and content of visits with families:**

9. Percentage of expected visits completed is 80% or greater for pregnancy phase.
10. Percentage of expected visits completed is 65% or greater for infancy phase.
11. Percentage of expected visits completed is 60% or greater for toddler phase.
12. On average, length of home visits with clients is a minimum of 60 minutes.
13. Content of home visits reflects variation in developmental needs of clients across program phases:

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<b>Average Time Devoted to Content Domains during Pregnancy</b>	
Personal Health	35-40%
Environmental Health	05-07%
Life Course Development	10-15%
Maternal Role	23-25%
Family and Friends	10-15%

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<b>Average Time Devoted to Content Domains during Infancy</b>	
Personal Health	14-20%
Environmental Health	07-10%
Life Course Development	10-15%
Maternal Role	45-50%
Family and Friends	10-15%

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<b>Average Time Devoted to Content Domains during Toddlerhood</b>	
Personal Health	10-15%
Environmental Health	07-10%
Life Course Development	18-20%
Maternal Role	40-45%
Family and Friends	10-15%

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**Objectives Concerning Maternal and Child Outcomes**

**Reduction in smoking during pregnancy:**

14. 20% or greater reduction in the percentage of women smoking from intake to 36 weeks pregnancy.
15. On average, a 3.5 reduction in the number of cigarettes smoked per day between intake and 36 weeks pregnancy (among women who smoked 5 or more cigarettes at intake).

**Percentages of preterm and low birth weight infants demonstrate progress toward Healthy People 2020 objectives:**

16. Preterm birth rate of 11.4%.
17. Low birth weight (LBW) rate of 7.8%.

The national target objectives listed above are for all women, irrespective of risk. Clients enrolled in the NFP typically are at higher risk for having preterm and low birth weight infants because, on average, they are younger, low income, less educated, first-time clients drawn from diverse racial and ethnic populations. While it is a national goal to eliminate disparities in health outcomes, women from economically disadvantaged and/or minority populations currently demonstrate higher rates of preterm and low birth weight infants. Thus, the progress that NFP

agencies can achieve realistically in reaching Healthy People 2020 objectives may vary based on the composition of the population served.

**Child health and development:**

18. Completion rates for all recommended immunizations are 90% or greater by the time the child is two years of age

**Maternal life-course development:**

19. Rate of subsequent pregnancies within two years following birth of infant is 25% or less

20. Mean number of months women (18 years or older) employed following birth of infant is:

- 5 months from birth to 12 months
- 8 months from 13 to 24 months







## Appendix C: Coordination Team

### The Colorado Nurse-Family Partnership Program

In Colorado, the Nurse-Family Partnership program is supported by the Nurse Home Visitor Program funds from the Colorado Department of Public Health and Environment. The Nurse Home Visitor Program is managed by a four-part team including the Colorado Department of Human Services, the National Center for Children, Families and Communities, the University of Colorado Anschutz Medical Campus, Nurse-Family Partnership National Service Office and Invest in Kids. This team is referred to as the Colorado Nurse-Family Partnership Coordination Team. The team is available to help all local sites with any questions or issues that may arise. Below you will find information that will guide you in deciding who to contact for specific situations.

#### For questions or issue related to :

 <p><b>Colorado Department of Human Services</b></p> <p><b>Fiscal Agent</b></p> <ul style="list-style-type: none"><li>• Annual state tobacco appropriation, annual grant application and funding selection process, contracts including funding conditions, please contact</li><li>• Finances/budgets including invoicing/ Medicaid estimates, please contact Mary Webb Martin 303-866-5023 or</li></ul>	 <p><b>INVEST IN KIDS</b></p> <p><b>Nurse Consultation, Site Development and Program Advocacy</b></p> <ul style="list-style-type: none"><li>• Updates to site contact information and other miscellaneous administrative items, please contact Holly Ruud, Program Coordinator NFP at 303-839-1808 x 104 or <a href="mailto:hruud@iik.org">hruud@iik.org</a>.</li><li>• Community awareness and involvement, advocacy and lobbying, development and/or expansion of sites please contact Michelle Neal, Program Director NFP at 303-839-1808 x101 or <a href="mailto:mneal@iik.org">mneal@iik.org</a>.</li><li>• Implementing the NFP curriculum, interpretation and use of the data, resources for nurses and clients please contact Michelle Neal or Nurse Consultant Barbara Hughes 303-839-1808 x115</li></ul>
 <p><b>Nurse-Family Partnership</b> <i>Helping First-Time Parents Succeed</i></p> <p><b>Nurse Training and Evaluation</b></p> <ul style="list-style-type: none"><li>• Scheduling participants for NFP education sessions and ordering NFP curriculum materials please contact the Nurse-Family Partner at <a href="http://www.nursefamilypartnership.org">www.nursefamilypartnership.org</a></li></ul>	 <p><b>University of Colorado Anschutz Medical Campus</b></p> <ul style="list-style-type: none"><li>• The Nurse Home Visitor Act requires the University of Colorado Anschutz Medical Campus to designate an entity to assist the State Board of Health in selecting, evaluating and monitoring sites. The University is this entity and subcontracts these responsibilities to the NFP National Service Office and Invest in Kids.</li><li>• <a href="http://www.ucdenver.edu">www.ucdenver.edu</a></li></ul>

**Appendix D: Colorado Quarterly Report through 6/30/13 (see attached)**