

2007

# Maine Home Visiting Program Annual Summary of Findings

Produced for  
*Maine Department of Health  
and Human Services*

Produced by  
*Hornby Zeller Associates, Inc.*





Contact Information:

*Department of Health and Human Services*  
Sheryl Peavey  
Director, Early Childhood Systems Initiative  
State House Station #11  
Augusta, ME 04333  
(207) 287-3339

*Hornby Zeller Associates*  
Shawn Delaney  
Project Evaluator  
100 Commercial Street, #300  
Portland, ME 04101  
(207) 773-9529

*Alliance for Healthy Families*

Kendra Williams  
Program Manager  
Goodall Hospital  
25 June Street  
Sanford, ME 04073  
(207) 490-7699

*Family First PATT*

Jane Brissette  
Program Manager  
Down East Community Hospital  
RR1 Box 11  
Machias, ME 04654  
(207) 255-0438

*Family Focus*

Barbara Reilly  
Program Manager  
2 Davenport Circle  
Bath, ME 04530  
(207) 386-1662

*Franklin Growing Healthy Families*

Renee Blanchet  
Program Manager  
113 Church Street  
Farmington, ME 04938  
(207) 778-6960

*Hancock PATT*

Cathy Jacobs  
Program Manager  
PO Box 1087  
Ellsworth, ME 04605  
(207) 667-5304

*Healthy Families Aroostook*

Dora Davis  
Program Manager  
37 Bangor St Suite 7  
Houlton, ME 04730  
(207) 532-1141

*Healthy Families Androscoggin*

Angie Bellefleur  
Program Manager  
Advocates for Children  
P.O. Box 3316  
Auburn, ME 04212-3316  
(207) 783-3990

*KVCAP Healthy Families*

Lanelle Freeman  
Program Manager  
Kennebec Valley Community Action  
Program  
97 Water Street  
Waterville, ME 04901  
(207) 859-1577

*Lincoln Healthy Kids!*

Hannah McGhee  
Program Manager  
Lincoln County Healthy Families  
PO Box 689, 127 Elm Street  
Damariscotta, ME 04543  
(207) 563-1818

*The Parent Partners Program*

Melissa Wakefield  
Program Manager  
Community Concepts  
4 Market Square  
PO Box 278  
South Paris, ME 04281  
(207) 743-1520

*Parent Ed. & Family Services Project  
of Knox County*

Caryn Drapkin  
Program Manager  
231 B Park Street  
Rockland, ME. 04841  
(207) 594-1980

*Penquis CAP, Inc. PATT*

Wesley Neff  
Program Manager  
262 Harlow Street  
PO Box 1162  
Bangor, ME 04402-1162  
(207) 490-7699

*Portland Public Health*

Lisa Belanger  
Program Manager  
Public Health Division  
Health & Human Services Dept.  
City of Portland  
389 Congress St., Rm. #307  
Portland, ME 04101  
(207) 874-8919

*Youth Alternatives Healthy Families  
Partnership*

Elizabeth Szatkowski  
Program Manager  
Healthy Families Partnership  
820 Main Street  
Westbrook, ME 04092  
(207) 854-2268

*Waldo PATT*

Pam LaHaye  
Program Manager  
University of Maine Cooperative  
Extension  
992 Waterville Road  
Waldo, ME 04915  
(207) 342-5971



# Contents

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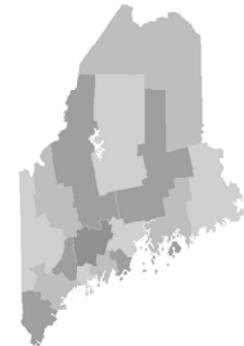
<b>Maine Home Visiting Program 2007 Quick Facts</b>	<b>i</b>
<b>Program Summary</b>	<b>1</b>
<i>About the Program</i>	<b>1</b>
<i>About the Families</i>	<b>2</b>
<i>Measuring Progress</i>	<b>3</b>
<b>Performance Measures</b>	<b>4</b>
<i>Nurturing Families</i>	<b>4</b>
<i>Protecting Children from Violence, Abuse and Neglect</i>	<b>4</b>
<i>Accessing Child Health Care</i>	<b>5</b>
<i>Protecting Children from Preventable Illness and Preventable Injuries</i>	<b>5</b>
<i>Ensuring Children are Developmentally on Track</i>	<b>7</b>
<i>Improving Prenatal Care</i>	<b>7</b>
<i>Reducing Unintended Pregnancies</i>	<b>8</b>
<i>Increasing Breastfeeding Rates</i>	<b>8</b>
<i>Reducing Alcohol and Tobacco Use and Exposure</i>	<b>9</b>
<i>Increasing Family Self-Sufficiency</i>	<b>10</b>
<b>Conclusion</b>	<b>11</b>



# Maine Home Visiting Program 2007 Quick Facts

## What the Program Is

The Maine Home Visiting Program is available to any teen parent and any family having its first child. Home visiting services are universally available throughout the state. An effort is made to enroll women before they have given birth to assure proper prenatal care. The program provides home-based education and support services on a range of topics – from child health and nutrition to caregiver behavior – to improve outcomes associated with healthy growth and development of infants and children.



Services are delivered by over 80 home visitors associated with 15 individual programs serving all 16 counties throughout Maine. Operating on a total budget of approximately \$4.5 million, in Fiscal Year 2007 the Program served over 5,600 families and conducted over 20,000 visits. It is managed by the Maine Department of Health and Human Services.

## Who the Program Serves

The program is open to any family having its first child and to all teen parents regardless of the parents' risk level, education or income. Enrollment in the program is completely voluntary.

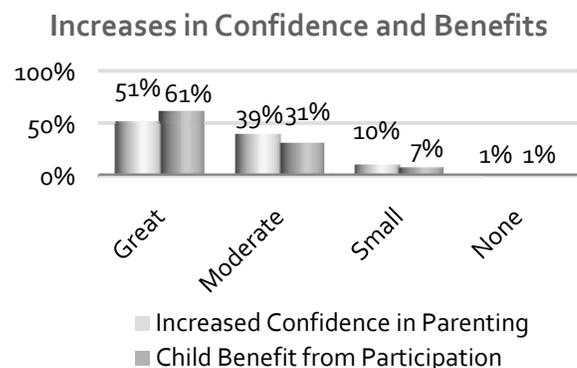
Ninety eight percent of primary caregivers enrolled in the program are biological mothers and the average age of the mother at the birth of her first child is just over 23 years. Approximately 30 percent of the families that enroll do so before their child is born.

## About the Program

The societal costs of less than optimal child development are vast and extensive. Children raised in environments where their developmental needs are not met are at an increased risk for compromised health and safety, and learning and developmental delays.<sup>1</sup>

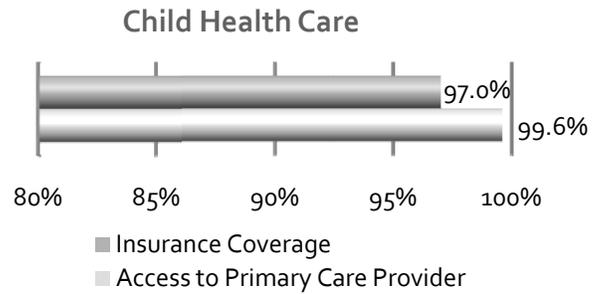
The home visiting model is designed to communicate to new parents and parents-to-be how best to promote healthy growth and development in physical, emotional and behavioral realms. Various measures are used to demonstrate the success of the program and to target areas for improvement. We know that, in the past year:

- Ninety percent of enrolled caregivers report a moderate to great increase in their confidence in their parenting skills. Ninety two percent report a moderate to great benefit to their child from participation. Over 90 percent report a positive change resulting from the information they received from a home visitor about: child development, home safety, child nutrition, child discipline, and car seat safety.



<sup>1</sup> Child Development, Department of Health and Human Services, Centers for Disease Prevention, <http://www.cdc.gov/ncbddd/child/>, accessed September 2007.

- The Program has achieved statistically significant differences in the number of families making improvements in many areas of home safety, including: preventing access to poisons, burn prevention, fire safety and general home safety.
- The Program effectuated a statistically significant increase in the number of caregivers taking efforts to reduce unintended pregnancies.
- In meeting basic needs, 98 percent of enrolled families had adequate food in the home and 99 percent adequately heated their home. To access needed resources, the programs engage in significant referral efforts to community resources such as WIC/TANF, childcare services, housing, legal services, transportation and counseling.
- Nearly all enrolled children have regular access to a primary care physician, 97 percent have some form of health insurance coverage, and 95 percent are up-to-date with their immunizations. Eighty-eight percent of prenatally enrolled mothers receive adequate prenatal care. All of these figures are higher than national averages.



- For caregivers who had an issue with their child’s exposure to secondhand tobacco smoke, 35 percent have eliminated their child’s exposure, and another 28 percent have reduced their child’s exposure. For caregivers where smoking was a concern, 43 percent reported either quitting or reducing use.
- While the rate of mothers who continue to breastfeed at one year from the birth of their child is higher among program participants than national averages, the rates of mothers who initially breastfed and those who breastfed at six months from the birth of their child trail those averages.

## Program Summary

### About the Program

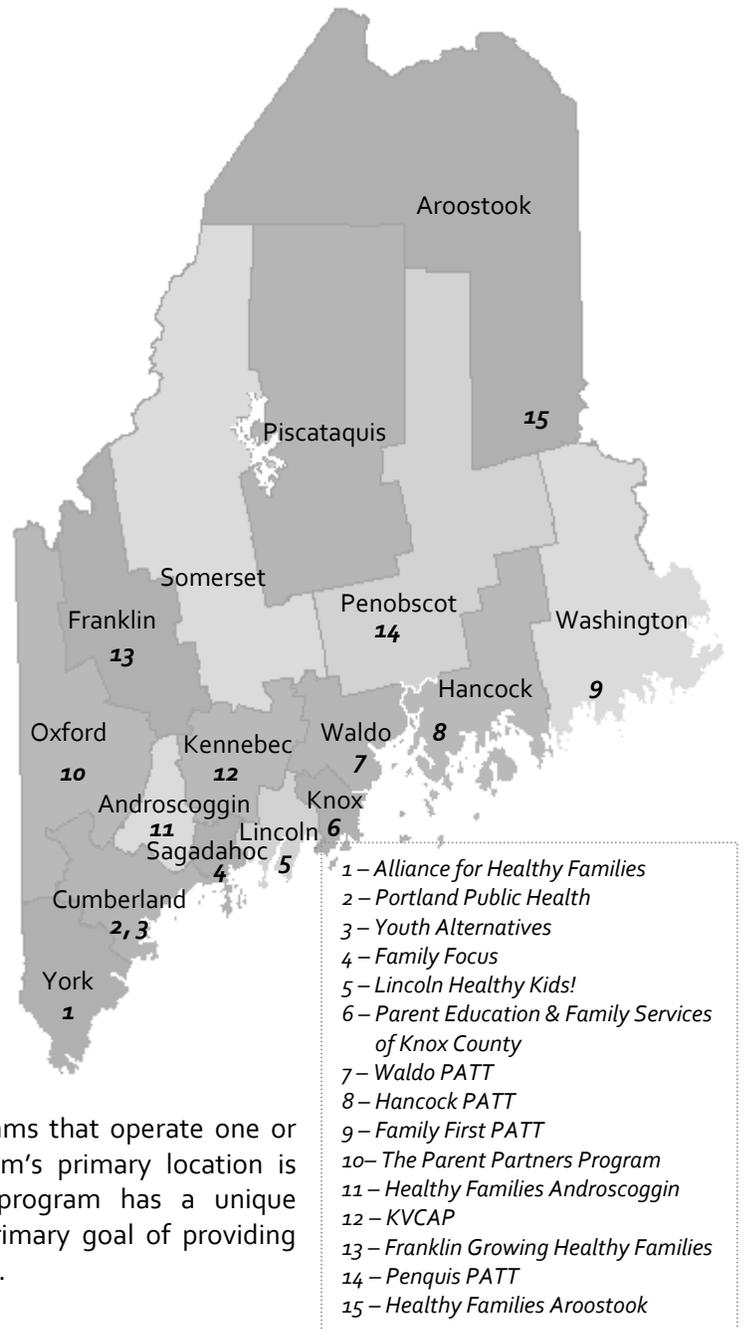
New parents face many uncertainties and challenges, ranging from providing health care for their child to creating a safe home environment. In this often stressful time, parents frequently do not know who or where to turn to for help. The Maine Home Visiting Program was designed to address those challenges by providing home-based education and support services for first time parents and pregnant and parenting adolescents throughout the State of Maine.

The aim of the Maine Home Visiting Program is to improve outcomes in many areas that have been shown to lead to healthy growth and child development. Home visitors discuss developmental milestones, perform screenings and assessments, demonstrate ways to interact with children, answer parents' questions, make referrals, and offer emotional support and a listening ear. They provide information on a range of topics including: child development, child nutrition, childproofing and home safety, car seat safety, child discipline, breastfeeding, and the impact of smoking and second-hand smoke.

The Program is delivered by 15 individual programs that operate one or more sites throughout the state. Each program's primary location is identified on the Maine map. While each program has a unique development history, they are united in their primary goal of providing quality, family-based services to first-time families.

Funding for each program is provided primarily by the Division of Family Health of the Maine Center for Disease Control with an overall grant of \$4,522,832. In Fiscal Year 2007, the programs served 5,609 families, 2,656 of them with home visits. A total of 20,484 were conducted during the fiscal year. More than half of the families received between one and three visits each quarter and over 16 percent received visits at least monthly.

Nearly 83 full-time equivalent home visitors serve the state. The number of home visitors per program ranges from two at Family Focus to 12 Alliance for Healthy Families. The programs engage in an extensive range of training activities preparing these home visitors to address the multi-faceted issues faced by new parents.



### About the Families

The Maine Home Visiting Program is universally accessible; open to any family having its first child regardless of the parents' risk level, education or income. It is also available to teen parents even if they already have other children. Families are served in all counties across the state. While any of these parents are eligible the program is voluntary and not all elect to enroll. The number of visits a family receives is not fixed; it depends on the needs of the parents and their level of interest.

Biological mothers make up 98 percent of the primary caregivers enrolled in the program. The average age of the primary caregivers is 26.3 and the average age of the mother at the birth of her first child is 23.9. The table below breaks down additional demographic information including marital status, race, education and income data.

Family Demographics	
<b>Marital Status</b>	
Married	37%
Single	34%
Partnering	26%
Divorced/Separated/Widowed	3%
<b>Race</b>	
White	94%
Black	2%
Asian	2%
American Indian	2%
<b>Highest Education Level Attained</b>	
Some High School	23%
High School Diploma or GED	40%
Some College	18%
Completed College	15%
Graduate School	4%
<b>Annual Income Level</b>	
Under \$10,000	27%
\$10,000 to \$19,999	27%
\$20,000 to \$29,000	14%
\$30,000 to \$44,999	14%
\$45,000 to \$74,999	14%
Over \$75,000	4%

Each year the enrolled families have the opportunity to respond to a survey about their experience. For the past four years, over 97 percent of those families responding reported they are very satisfied with their home visitor. Additionally, 93 percent agree that the number of visits they receive is just about right, suggesting strong agreement between programs and families that the level of service provided is appropriate. Almost all caregivers (99 percent) perceive the home visiting staff as understanding their needs and treating them with respect, while 93 percent say the home visitor is good at getting them the information they need.

One of the most relevant means of measuring the benefits provided by the program is the level of satisfaction expressed by the families served. Comments received from surveyed parents are very affirming. They see the programs as vital resources for providing educational information, as well as a social outlet to escape the isolation often associated with young parents and an opportunity to learn from other parents. Examples include:

*"Not only have we grown in a positive direction thanks to the information provided but I've also been given opportunities to grow personally in my own self-confidence."*

*"At a point when I felt most isolated, my home visitor helped me with my esteem and self-confidence and it was reassuring just to have someone to be there."*

*"I find visits to be most useful hearing that other parents experience similar situations with their children and that I am not alone."*

*"Being a first time parent and hearing all the tales of what to expect can be overwhelming. My home visitor has helped keep my son and me on target and he truly enjoys having her come."*

## ***Measuring Progress***

The home visiting model is designed to communicate to new parents and parents-to-be best practices for child development, health, safety and nutrition. Outcomes associated with families' involvement are centered on specific objectives the programs have set to meet their broad performance goals. These goals for enrolled children and families include:

- Nurturing by their families in ways that promote healthy physical and emotional development;
- Protecting them from exposure to violence, abuse and neglect;
- Improving access to health care\*;
- Keeping them safe from preventable injuries\*;
- Protecting them from preventable illness and medical conditions\*;
- Reducing their exposure to alcohol and tobacco\*;
- Ensuring they are developmentally on track for their age\*;
- Improving access to prenatal and adult health care\*;
- Increasing self-sufficiency and meeting their basic needs;
- Increase breastfeeding rates\*, and
- Preventing unintended pregnancies\*.

Many of these program goals are also identified as priority areas for *Healthy People 2010*; a national framework of disease prevention and health promotion.<sup>1</sup> Of the eleven program goals presented here, eight are also key indicators within *Healthy People 2010*. This symmetry between home visiting program goals and *Healthy People 2010* indicators demonstrates that national public health priorities are being addressed at the state and programmatic level. Moreover, while the program is primarily educational in nature, it incorporates a public health approach that emphasizes prevention and is comprehensive in scope.

Progress towards such goals results not only in increased family and child health and well-being, but in financial savings as well. The cost-burden associated with poor health practices is significant. For example, costs associated with fetal alcohol spectrum disorder (FASD) alone total over \$6 billion per year.<sup>2</sup> Logically, any steps that can be taken to alter behaviors and reduce such problems can substantially impact associated health costs on both a state and national level. The Home Visiting program targets families even before they give birth, to increase the likelihood of proper prenatal care.

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\* Key Indicators of Healthy People 2010

## Performance Measures

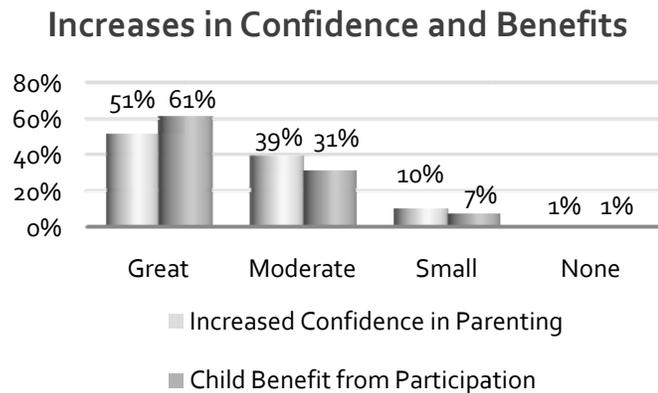
### *Nurturing Families*

Helping families to provide a nurturing environment for their child is extremely important for a child's healthy development. Research has demonstrated that a nurturing relationship in a child's early years is associated with better long-term outcomes. These outcomes include increased academic performance, improved health behaviors, positive peer interactions, and increased ability to handle stress.<sup>3</sup> Children who grow

up in environments that are not supportive and stable, or without a positive, nurturing relationship, often have a disrupted development, which can cause lasting consequences. For example, lack of physical contact or interaction with a primary caregiver can change an infant's body chemistry, resulting in lower growth hormones necessary for brain and heart development.<sup>4</sup>

Families' perceptions about the effects of home visitation on their parenting skills and child's outcomes are present in Figure 1. As shown, the vast majority of families believe the program has had a moderate to great increase in their parenting confidence and the benefit received by their child resulting from program participation.

Figure 1



Positive Change Results through the Provision of Information	
Category	Percent Reporting Change
Child Development	98%
Home Safety	97%
Child Nutrition	97%
Child Discipline	93%
Car Seat Safety	92%
Breastfeeding	86%
Secondhand Smoke	84%
Smoking	78%

More specifically, caregivers report that program involvement has resulted in positive changes in many areas based on the information the program provides. The adjacent table shows the percent of families reporting positive change as a result of the information they received from their home visiting program. Note that child development, the safety of the home and child nutrition head the list.

### *Protecting Children from Violence, Abuse and Neglect*

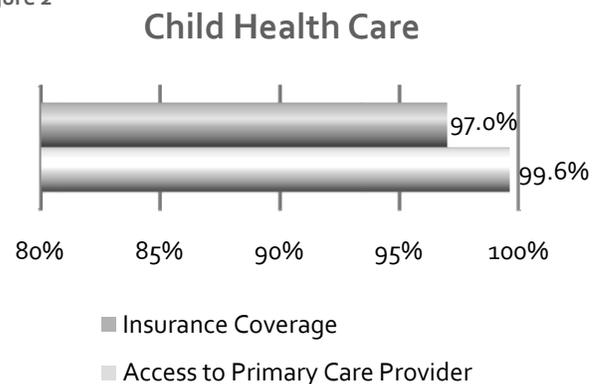
Child maltreatment affects almost one million children every year nationally and the consequences are profound and diverse. In infancy and early childhood, abuse can significantly affect brain development, potentially leading to lasting physical, mental, and emotional problems. In adolescence, research has demonstrated that maltreatment increases the risk for poor academic performance and problematic behavior. Emotional and psychological consequences can emerge, including: low self-esteem; depression and anxiety; attachment difficulties; and poor peer relations. Adults who were maltreated as children are at increased risk for numerous problematic health effects and behavior, including: substance abuse; mental health problems; and criminality and violent behavior. In 2001, the total estimated cost on a national level of child maltreatment was approximately \$94 billion per year, demonstrating the strain it places on the nation's health, school, and criminal justice systems.<sup>5, 6</sup>

There are multiple protective factors that may lessen the risk of child maltreatment, including: a supportive family environment; nurturing parenting skills; stable family relationships; access to health care and social services; and social connections.<sup>7</sup> The home visiting program is aimed at providing parents with the very things that help to enhance a family's protective factors for child maltreatment. To increase family strengths and reduce a child's exposure to harm, home visitors provide support and information to families about meeting a child's needs, developing healthy and nurturing relationships, and understanding child development. Unfortunately, this is an area where accurate impact data is difficult to obtain due to several factors including the confidentiality of Child Protective Service activities, the reluctance of families to share this information, and the fact that home visitors themselves are mandated reporters for child abuse and neglect.

### Accessing Child Health Care

Health care providers and government agencies recommend that all children have access to quality services for health promotion, disease prevention, and acute and chronic care treatment and management. Health insurance coverage is an important predictor of a child's health and well-being as, quite simply, uninsured children suffer worse health, are more likely to lack a constant source of health care, and are more likely to go without needed care than their insured counterparts. While in general children and adolescents tend to be healthier than adults, infants have a higher mortality rate than any age group under age 55, and 13 percent to 23 percent of children experience special health care needs or chronic illnesses and disabilities.<sup>8</sup> Uninsured children are also more likely to delay seeking care when problems do arise, resulting in higher levels of care needed. Not only does this place a potential financial burden on the family, it also places a burden on taxpayers. It is estimated that the poorer health of those who are not insured cost between \$65 and \$130 billion annually.<sup>9</sup> Additionally, studies show that children with health insurance are more likely to do well in school and have improved social and emotional development.<sup>10</sup> Still, one out of every eight children nationally lacks health insurance.<sup>11</sup> For children enrolled in the home visiting program however, the results are strikingly better. Nearly all children enrolled in the home visiting program in 2007 had access to a primary care provider and nearly as many had either private insurance or Medicaid (MaineCare) coverage, as shown above in Figure 2.

Figure 2

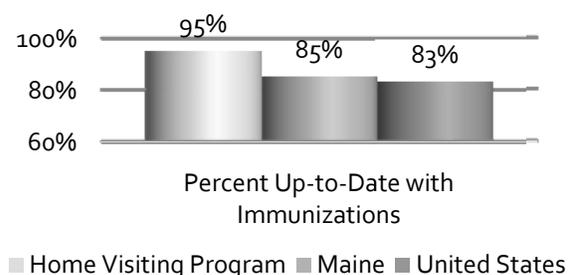


### Protecting Children from Preventable Illness and Preventable Injuries

Immunization is a proven tool for controlling and even eradicating diseases and represents the most significant way in which children can be protected from over a dozen deadly infectious diseases such as measles, tuberculosis, and tetanus. Immunization, as a form of preventative care, is also financially effective. For every dollar spent on a vaccine, seven dollars in medical costs and 25 dollars in overall costs are saved.<sup>12</sup>

Figure 3

### Childhood Immunizations

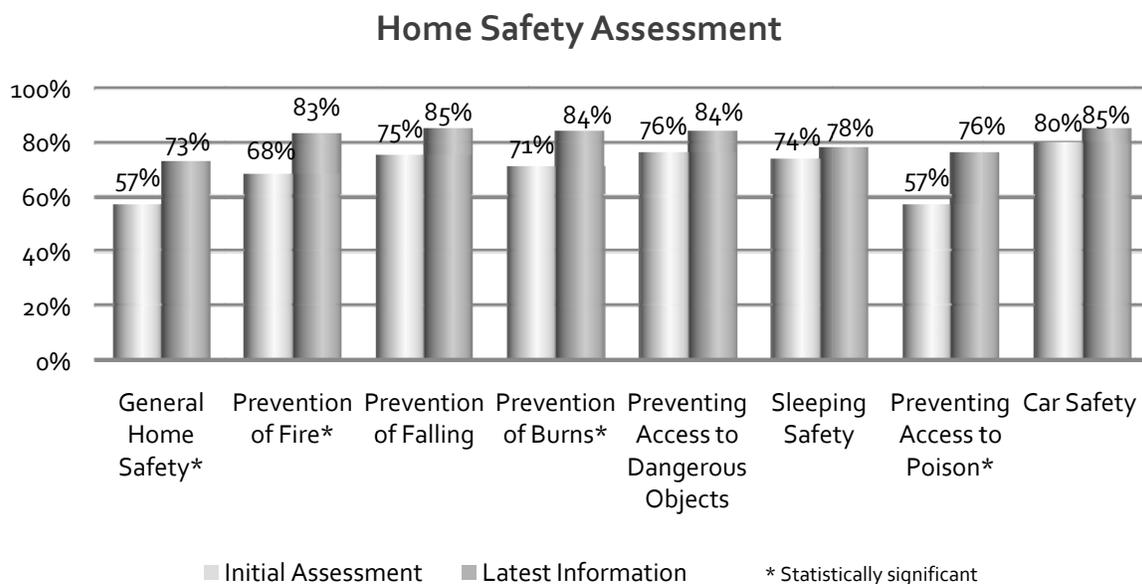


Children need 80 percent of their vaccinations in the first two years of their lives.<sup>13</sup> Through the provision of information, encouragement and referrals to health professionals, the Home Visiting Program has achieved an up-to-date immunization rate far higher than the state and national averages, as shown in Figure 3.<sup>14</sup>

Unintentional injury is listed as the leading cause of death for children between the ages of one and four, and the fifth leading cause of death among children from birth to age one by The National Safety Council. For children ages one to five, motor vehicle accidents specifically are the leading cause of death, accounting for over a third of deaths caused by preventable injury. A lack of child restraint is a significant contributor to motor vehicle deaths.<sup>15</sup> Additionally, research has shown that over 70 percent of child restraint systems are misused in manner that can increase a child’s risk of injury. For infants, proper child safety seats use can reduce the risk of death by 71 percent. For children from birth to age one, suffocation is the leading cause of death by preventable injury, accounting for over a third of such deaths. Suffocation can be caused by improper sleeping arrangements, access to dangerous materials such as plastic bags, and food.<sup>16, 17, 18</sup>

Although such injuries clearly account for a large portion of infant and child mortality, they are, as their name implies, entirely preventable. Educating parents about such risks and helping them implement safe practices are important means of reducing the potential harm. To help prevent childhood injuries, home visitors identify problem areas in the home, educate families about needed changes and help them to implement them. Figure 4 shows the major home safety categories on which families are assessed and their progress in meeting safety requirements within those categories from the initial home assessment to the most recent information available. In several areas there are statistically significant differences in the number of families making improvements.

Figure 4



### ***Ensuring Children are Developmentally on Track***

Developmental delays occur when children have delayed achievement of one or more of their milestones (a range around the average age at which a child will achieve a new skill). Such delays may affect a child's speech and language, fine and gross motor skills, and/or personal and social skills. National estimates for children with a developmental or behavioral disability are about 17 percent. The most commonly diagnosed disabilities are autism, mental retardation, hearing or vision loss, and cerebral palsy. While many of these disabilities can affect a child's school readiness, less than 50 percent of children with a developmental or behavioral disability are identified before starting school.<sup>19</sup>

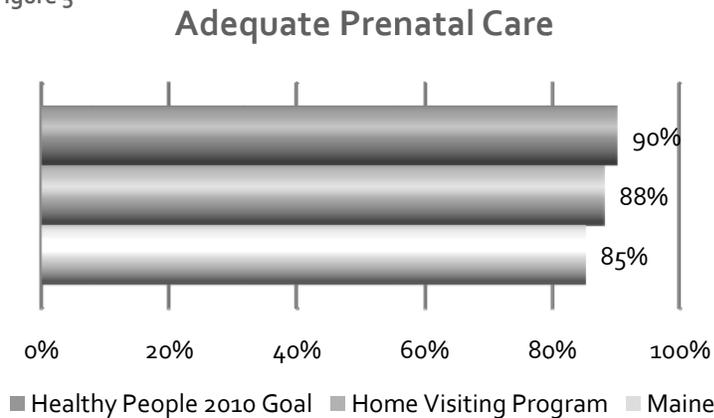
Developmental screening is designed to identify children who should receive more intensive assessment or diagnosis for potential developmental delays. It can allow for earlier detection of delays and improve child health and well-being for identified children by ensuring that windows of opportunities for treatment have not been missed.<sup>20</sup> Early screening and identification of such disabilities can significantly improve a child's functioning while reducing the need for lifelong interventions. Preliminary research of two separate programs demonstrates that savings brought about by timely screening can range from \$17,081 to \$23,921 per child who underwent early intervention.<sup>21</sup>

In FY 2007, the Home Visiting Programs collectively identified 13 percent of enrolled children as having possible delays. Of those children, 81 percent were receiving services beyond home visiting itself to address the child's development, many prompted by interventions of the home visitor.

### ***Improving Prenatal Care***

Receiving prenatal care is an important health factor for both mother and child. The American Medical Association recommends 14 prenatal care visits during a 40-week pregnancy for a typical, low-risk pregnancy. The benefits of prenatal care include improved birth outcomes through the diagnosis of treatable conditions and encouragement of better maternal health habits<sup>22</sup> as well as decreased rates of pregnancy complications in comparison to women who initiate late or no prenatal care.<sup>23</sup> Mothers who receive care are both less likely to deliver prematurely and have serious complications during the pregnancy, and are also more likely to give birth to healthy babies. By providing regular and frequent care for pregnant women, doctors can identify potential problems before they become significant health complications for both mother and child.<sup>24, 25</sup>

Figure 5



Using a nationally recognized tool, the Kotelchuck Index<sup>26</sup>, the programs measure the adequacy of prenatal care received by expecting mothers enrolled in the program. While the programs have not yet quite achieved the goals set by the Healthy People 2010 Initiative, they have made improvements over statewide averages.

### ***Reducing Unintended Pregnancies***

It is estimated that 60 percent of pregnancies – and 81 percent of pregnancies among adolescents – are unintended.<sup>27</sup> The lack of use of contraceptives and/or the lack of knowledge about the proper use of contraceptives are the major reasons for unintended pregnancies. While national statistics show that most women use contraception, seven percent of the women at risk of an unintended pregnancy use no method of contraception and account for nearly half of all unintended pregnancies. Of these pregnancies, almost half result in abortions. Adolescents, unmarried women, and women with an annual household income below 200 percent of the federal poverty level are at an increased risk for such pregnancies.<sup>28</sup>

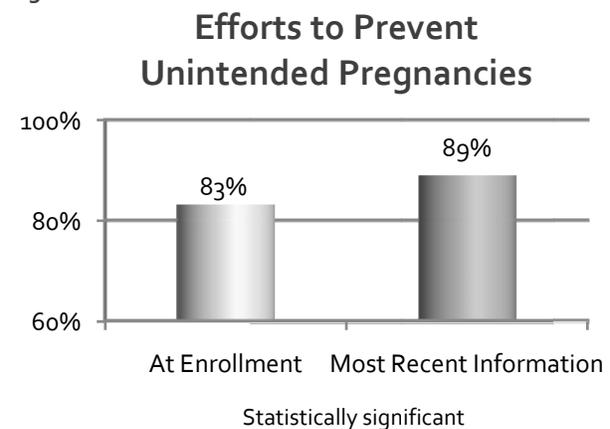
The consequences of unintended pregnancies are numerous and include:

- Increased health and economic risks for children, women and families;
- A lack of preconception risk identification and management, which increases medical problems for the mother and fetus; and
- A greater chance of having the infant exposed to harmful substances such as tobacco and alcohol.

Women who have unintended pregnancies are less likely to seek prenatal care, especially within the first trimester; as a result, children of unintended pregnancies have lower birth weights, as well as increased risk of unhealthy development and even death within the first year of life.

Preventing unwanted pregnancy has financial benefits by reducing the health risks and long-term consequences associated with unintended pregnancies. These benefits include reduced Medicaid expenditures, a lower abortion rate and reductions in infant mortality, child abuse and neglect and welfare dependence. A disproportionate share of women with unintended pregnancies is unmarried leading to increased medical and social burdens for the children and their parents.<sup>29</sup> As shown in Figure 6, an increased percent of families involved with the program take measures to prevent unwanted pregnancy after enrollment than before.

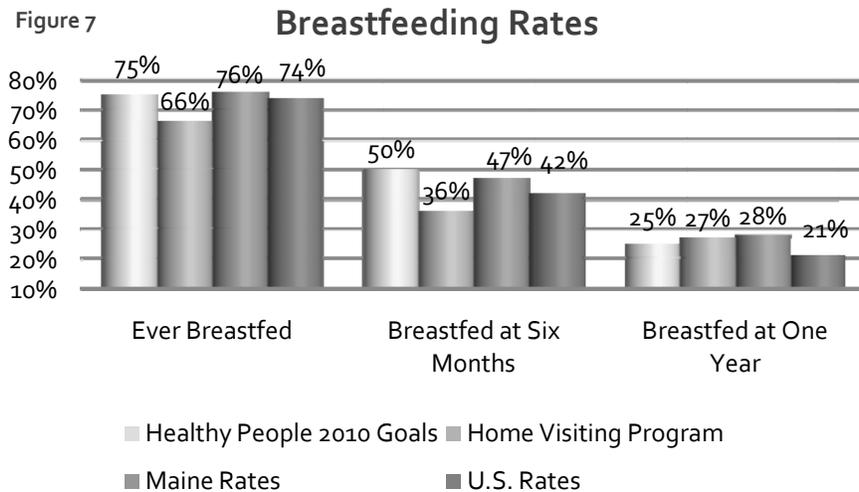
Figure 6



### ***Increasing Breastfeeding Rates***

Breastfeeding has had a relatively recent rediscovery as a means of saving lives, reducing illness and fostering optimum child development. Health professionals as well as policy makers are increasingly recognizing that breastfeeding promotion efforts can reduce health care costs through enhancing maternal and infant well-being as breast milk is the most important nutritional substance available to the newborn child. Breastfeeding decreases rates of multiple health problems among infants, including diarrhea, respiratory infections, and ear infections and helps build healthy infant immune systems.<sup>30</sup> For mothers, breastfeeding promotes a quicker return to health after the birthing process. Mothers who breastfeed have a reduced risk of postpartum bleeding, are more likely to return to their pre-pregnancy weight, and can act to prevent further pregnancies (while exclusively breastfeeding).<sup>31</sup>

Breastfeeding also remains the first and best way to form a secure bond between mother and child, nurturing communication and emotional development.<sup>32</sup> The home visiting program actively encourages new mothers to breastfeed their child and links mothers to resources such as hospital breastfeeding classes and lactation consultants. As shown in Figure 7, a larger percent of home visiting families were breast feeding at one year that even the Healthy People 2010 Goals.



### ***Reducing Alcohol and Tobacco Use and Exposure***

Children's exposure to environmental tobacco smoke results in substantial public health and economic impacts. Children are more likely than adults to suffer health effects from second hand smoke, and the home is the most significant site of such exposure.<sup>33</sup> Children born to mothers who smoke have significantly lower birth weight, a key health indicator significantly related to infant mortality. For mothers, smoking during pregnancy is associated with adverse maternal conditions, such as premature rupture of the placenta, and poor pregnancy outcomes, such as preterm delivery and stillbirth.<sup>34</sup>

Likewise, prenatal exposure to alcohol can adversely affect the fetus. It is now generally accepted that the adverse effects of prenatal alcohol exposure exist along a continuum termed Fetal Alcohol Spectrum Disorders (FASD)<sup>35</sup>, with Fetal Alcohol Syndrome the most profound of the disorders. Effects of FASD include low birth weight, failure to thrive, heart and skeletal defects, mental retardation, and behavioral disturbances.<sup>36</sup> Before reaching adulthood, an estimated 25 percent of children and adolescents will be exposed to some form of problematic alcohol use within their family. The implications for growing up in an environment where alcohol is present are considerable. Exposed children are more likely to initiate drinking at an earlier age, are more likely to develop their own problems with addiction, and are more likely to have problems with delinquency, school performance and behavioral disturbances.<sup>37, 38</sup>

Clearly, children's exposure to alcohol and tobacco carries significant health and behavioral risks. Based on the timing of the intervention (either neonatal or post-natal), reducing children's exposure to alcohol and tobacco can not only significantly benefit their lives, but also result in health cost-savings. Costs associated with smoking during pregnancy are estimated at \$366 million per year. Additionally, an estimated 40,000 babies are born with an FASD each year, with associated costs estimated to reach \$6 billion annually.

Of the 844 families served by home visiting programs in Maine for whom secondhand smoke was a concern, 35 percent have eliminated their child’s exposure and another 28 percent have reduced their child’s exposure. Of the 1262 families where caregiver smoking was a concern, 24 percent have reported stopping use and an additional 19 percent have reported reducing use. For the 381 families where child exposure to problematic alcohol use was a concern, 32percent have eliminated exposure and another four percent have reduced exposure. Of the 690 families where caregiver problematic use of alcohol was a concern, 38 percent reported stopping use and another 7 percent reported reduced use.

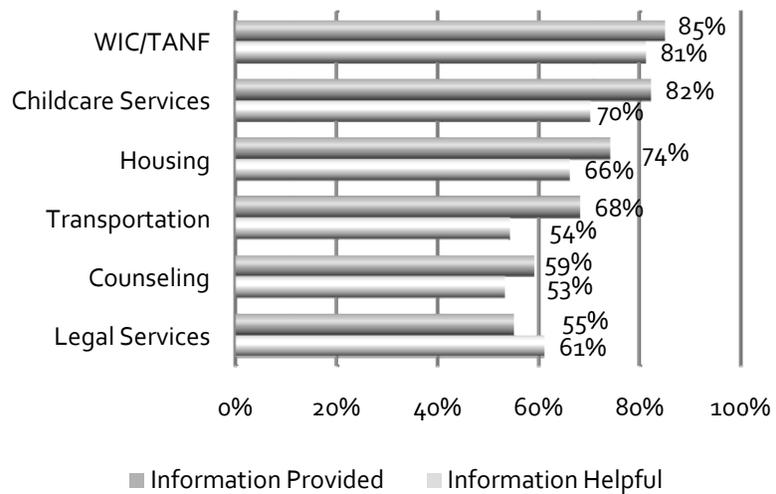
**Increasing Family Self-Sufficiency**

Families are considered to be self-sufficient if they can attain basic amenities such as housing, child care, transportation, and health care. Many families with one or even two working parents are not able to live without some form of financial or other resource assistance.<sup>39</sup> While it is important to help families gain the skills and experience necessary to attain self-sufficiency, it is equally as important to assist families in receiving the help they need in the meantime.

With regard to meeting their family’s basic needs 98 percent of families had adequate food in the home and 99 percent adequately heated their home. For those remaining families, the programs reported working to improve their status. To access needed resources, the programs engage in significant referral efforts. Figure 8 at right lists the major community resources to which families are linked and shows the percent of families that found the information to be helpful to them.

Figure 8

**Connecting Families with Community Resources**



## Conclusion

Raising a child is not an easy task. New parents are confronted with multiple issues that will emerge and endure as their child develops. Parents must care for their child physically, provide a nurturing and healthy environment, and protect them from harm. Not only are the child's needs of concern, but parents are also forced to address their own needs and issues that accompany the birth of a child. Many first time parents feel overwhelmed, isolated from their family and friends, and are unaware of how best to care for their newborn. A child's first years of life are full of opportunities for growth as well as potential for impairment that can have long term effects on healthy development.

Early childhood programs can be found across the country and exist to help families through the challenging times of raising a child. These programs help to provide a positive influence to compensate for the various risk factors that can compromise healthy child development in their very formative years. On a national level, research has demonstrated that early childhood programs such as Maine's Home Visiting Program can improve the lives of parents and children for years to come.<sup>40</sup> Moreover, the effects of programs have the potential to translate into eventual monetary savings, as highlighted throughout this report.

The data generated by the Home Visiting Program is very positive. In regard to the identified outcome measures and in comparison to national health levels, families who participate in the program have higher rates of breastfeeding at one year, child immunization, child health insurance, and adequate prenatal care for parents. While such factors are often important in quantifying the cost benefit and demonstrating the impact of the program, it is also equally important to highlight the numerous other services that all of the programs provide, such as playgroups and group activities that afford parents with an opportunity to connect with other parents in the community. In providing home and community based services, Maine's Home Visiting Program contributes a valuable service to the state by working to provide support, education, and resources for first-time families and teen parents.



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