Report
to
The LEGISLATIVE FINANCE COMMITTEE

Human Services Department
Improving Outcomes for Pregnant Women and Infants Through Medicaid
September 27, 2012

Report #12-10

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September 27, 2012

Ms. Sidonie Squier, Secretary
Human Services Department
2009 S. Pacheco St. – Pollon Plaza
Santa Fe, New Mexico 87505

Dear Secretary Squier:

On behalf of the Legislative Finance Committee (Committee), I am pleased to transmit the *Evaluation of Medicaid: Improving Outcomes for Pregnant Women and Young Children* for the Human Services Department. The evaluation team assessed the current health status of these populations and how Medicaid may improve outcomes.

The report will be presented to the Committee on September 27, 2012. An exit conference was conducted with the Human Services Department to discuss the contents on September 20, 2012. The Committee would like a plan to address the recommendations in this report within 30 days from the date of the hearing.

I believe this report addresses issues the Committee asked us to review. We appreciate the cooperation and assistance from the agency's staff and the managed care organizations.

Sincerely,

David Abbey, Director

Cc: Senator John Arthur Smith, Chairman, Legislative Finance Committee
Representative Luciano "Lucky" Varela, Vice-Chairman, Legislative Finance Committee
Representative Henry "Kiki" Saavedra, Legislative Finance Committee
Dr. Tom Clifford, Secretary, Department of Finance and Administration

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The average age of a New Mexico Medicaid enrollee is 13 years old.

Live Born Infants with Low Birth Weight in New Mexico, 2000-2010

Source: DOH

A Nurse-Family Partnership home visiting program has been established at the University of New Mexico Center for Development and Disability through federal Maternal, Infant, and Early Childhood Home Visiting (MIECHV) funding administered by the Children, Youth, and Families Department (CYFD).

According to the National Center for Infants, Toddlers, and Families, 75 percent of young children in New Mexico have at least one risk known to impact health, education, and development and 23 percent of children are at moderate or high risk for developmental delays or behavior problems. The Annie E. Casey Foundation's latest report ranks the health and welfare of New Mexico's young children 49th in the nation.

While New Mexico has high concentrations of risk factors affecting pregnant women and children, evidence strongly confirms that early intervention and ongoing health care results in children who are more school-ready than children who do not receive adequate care. In FY11, at a cost of $4 billion, Medicaid covered 28 percent of New Mexico's population, 62 percent of whom are children, and paid for 71 percent of all births.

Previous work of the Legislative Finance Committee (LFC) highlighted a need to coordinate the state's early childhood system of care, to increase funding, and to leverage Medicaid as a driver for systemic improvement.

This evaluation reviewed Medicaid program outcomes for pregnant women and very young children (ages zero to three), including measurers of access, quality, and cost-effectiveness. Also, this evaluation assessed current as well as potential strategies to improve outcomes and lower costs, including reforming payment structures, differing the mix of services, and better-coordinating care.

As the major sponsor of healthcare services for pregnant women and young children in New Mexico, the state has the opportunity to use Medicaid to improve the quality of life for these populations. Efforts in other states provide examples of how Medicaid agencies have the capacity to improve health outcomes for families.

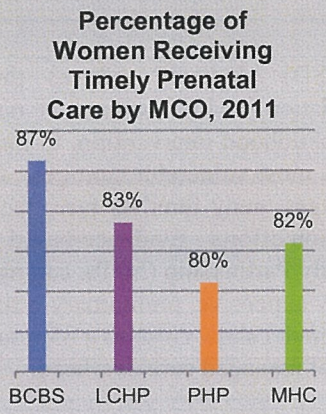
The Human Services Department (HSD) Medicaid reforms through Centennial Care provide a strong foundation. More balance is needed, however, focused on maternal and early childhood intervention, to improve New Mexico's long-term prospects for its most vulnerable families. Given the serious health and well-being challenges many families face, the state must direct resources to intensive prevention efforts. Evidence-based home visiting programs, such as the Nurse-Family Partnership (NFP), can provide these needed interventions. While initially expensive, preliminary estimates from the LFC New Mexico Results First model show close to a $5 return on every dollar invested, including the costs of managed care overhead.

Early interventions promote the health of children in the first three years when the developmental process is more robust.

Developmental screening is a short test to tell if a child is learning basic skills when he or she should, or if there are delays. Developmental screening can also be done by other professionals in health care, community, or school settings.

Early interventions can minimize future costs of treating the chronically ill.

Well-child visits allow doctors and nurses to have regular contact with children to keep track of or monitor their health and development through periodic developmental screening.



KEY FINDINGS

Medicaid has the funding leverage to improve health and decrease long-term costs. Medicaid, enrolling an estimated 62 percent of children in the state and paying for 71 percent of births, plays a major role improving child health and development. Of all child enrollees and estimated 125 thousand are ages birth to three years.

Lack of standard screening tools and access to well-child visits hampers efforts to boost identification of delays in child development and target interventions. The Medicaid program and New Mexico in general, does not require a standard screening tool to assess child development. Using a standard, validated screening tool will provide consistency in data reporting ability and identification of the incidence of delay. The incidence of delay will demonstrate that resources for interventions are adequate to meet need or not. Most importantly, by using an appropriate screening tool, problems can be addressed earlier in the child's development, allowing earlier intervention to be more effective.

Over a third of infants do not receive the recommended number of well-child visits through Medicaid. These visits, to be scheduled at specific ages, are to assess the physical, developmental, oral, and mental health of a child. This is a crucial time period in an infant's physical and developmental stages. Three managed care organizations (MCOs) have exceeded HSD's 62 percent target, but many children are still not receiving the recommended visits. In fact, performance for some MCOs appears to have declined over time.

Late and infrequent access to prenatal care undermines efforts to improve birth outcomes and lower Medicaid costs for deliveries. Prenatal care is one of the most effective interventions to improve birth outcomes. In 1985 the Institute of Medicine estimated a return on investment of $3.38 for every dollar spent on effective prenatal care. Consequences for infants born to mothers who have not received prenatal care include pre-term delivery, low birth-weights, congenital anomalies, and mortality. Also, in 2007, between 45 percent and 68 percent of enrollees received the recommended frequency of prenatal care. Again, MCOs appear to be improving modestly over time. However, Presbyterian's low rates of women receiving the recommended frequency of prenatal visits is concerning given this plan has the largest enrollment.

Over half of pregnant women enrolled in Medicaid managed care enter prenatal care after the 13th week of pregnancy. Previous LFC reports have highlighted New Mexico and the Medicaid program's persistently low rates of women receiving full prenatal care.

Complications with deliveries and newborns result in significantly higher costs. In FY11, complicated deliveries costs were 30 percent higher than a normal delivery. Nationally, the cost difference is 25 percent. According to two MCOs, newborns with complications on average cost over $14 thousand compared with peer costs of less than $900. In FY11, 35 percent of infants were identified by the billing hospital as having complications, a

Number of NBICU Admissions for New Mexico's MCOs, FY10 and FY11

MCO	FY10	FY11
BCBS	43	80
LHP	209	147
MHC	109	111
PHP	698	752

Source: MCO Reported Data

Cesarean Delivery Rate for US and NM, 1996 and 2007

	1996	2007	Percent change
United States	20.7	31.8	54
New Mexico	17.2	23.3	35

Source: Centers for Disease Control (CDC)

Postpartum depression (PPD) affects 10 percent-15 percent of mothers nationally within the first year after giving birth. Younger mothers and those experiencing partner-related stress or physical abuse might be more likely to develop PPD.

5 percent increase from the previous year by just two of the four MCOs. Hospital delivery costs are impacted as well if the mother's delivery is complicated. The average hospital cost per delivery in FY11 was $1,676, up 5 percent from FY10. In contrast, the average cost of a complicated delivery was $2,149. In FY11, according to data from two Medicaid MCOs, 46 percent of births had complications. Complicated deliveries resulted in higher hospital costs, primarily due to longer length of stay.

Babies born prematurely are at-risk for health problems, but the risk for serious complications increases as the term of the pregnancy decreases. Babies who are delivered prematurely could face a number of challenges during early childhood and into adulthood, including low birth-weight, underdeveloped organs, greater risk for life-threatening infections, vision impairment or loss, increased risk for cerebral palsy, bleeding into the brain, heart disease, and greater risk for learning and developmental disabilities. Pre-term birth is the leading cause of infant mortality in the United States.

The associated adverse health outcomes for pre-term babies costs Medicaid programs an estimated average of $20 thousand in medical care during first year of life compared to $2,100 for full-term infants, according to the United States Department of Health and Human Services. About 5 percent of New Mexico's total births, 1,412, were delivered pre-term at less than 37 weeks gestation. A study cited by the March of Dimes found that Cesarean sections account for nearly all of the increase in premature births of single infants in the United States. In New Mexico, the rate of babies born through c-sections increased by 35 percent during the period from 1996 to 2007. No formal modifier is used by hospitals or providers to collect data on non-medically necessary deliveries prior to 39 weeks of gestation.

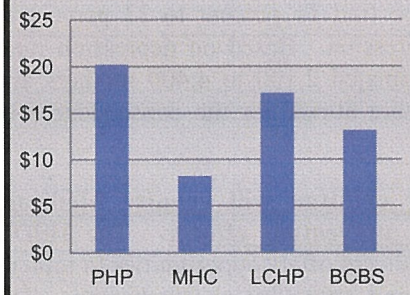
Medicaid, and the state in general, lacks a standard screening tool or assessment process for providers to identify maternal depression, which can negatively impact health care costs and the cognitive development of children. Maternal depression can affect children's development in toddlerhood and childhood stages. Children of depressed mothers may act out more, have problems learning, have difficulty forming friendships, and have difficulty getting along with peers. When maternal depression exists with other risk factors during a baby's first year, the likelihood increases that a child will show significant behavioral, attention, or anxiety problems by age three. Studies in New Mexico find 11 percent to 23 percent of women are at-risk for postpartum depression. Based on depression rates and Medicaid enrollment rates, an estimated 2,100 to 4,400 mothers and their children on Medicaid each year are at-risk for the consequences of untreated maternal depression.

Improving long-term outcomes for children will require Medicaid investments in early and intensive prevention efforts. The HSD's Centennial Care proposal to reform Medicaid offers opportunities to refocus the system on patient-centered care and value-driven purchasing. The Children's Cabinet has identified central challenges, including child well-being and school readiness that must be improved to benefit the state's young people. Key goals include using home visiting programs to improve birth outcomes and prenatal care.

The Protective Services Division of the CYFD accepted 17 thousand reports of abuse and neglect in 2010.

New Mexico's Medicaid program covers pregnant women with incomes of up to 185 percent of the Federal Poverty Level ($3,554 monthly income for a family of four). In 2010, this placed NM in the top ten states for this benefit level.

MCO Cost for Top Five Most Frequent Hospital Stays for Children Birth to Three-Years Old, FY11
(in millions)



Source: MCO Reported Data

Some children on Medicaid have higher risk factors for multiple adverse childhood experiences, which have life-long negative health, social, and cognitive impacts and require intensive prevention services. The state can save money over the long-term if Medicaid helps to address and even prevent exposure to multiple adverse childhood experiences (ACE). ACE include sexual, physical, and verbal abuse; substance abuse in household; and witness to domestic violence. Almost 20 percent of surveyed New Mexicans report having four or more ACE. The study concludes that a high prevalence of ACE leads to several health and social issues including: alcoholism, depression, fetal demise, illicit drug use, heart disease, multiple sexual partners, sexually transmitted diseases, smoking, unintended pregnancies, and adolescent pregnancies. Curbing the impact of ACE requires early prevention and consistent interventions.

Families with complex needs require additional targeted assistance, though the Medicaid program lacks some of these needed services. A Medical home is a health care model in which individuals use primary care practices as the basis for accessible, continuous, comprehensive, family-centered, and integrated care. Thirty percent of children from families with income levels below the federal poverty level have access to medical homes in New Mexico, compared with 39 percent nationwide.

Prior to the submission of the waiver request, the MCOs, through pay-for-performance dollars from the Challenge Fund, were directed by HSD to begin implementation of medical homes. Pediatric practice clinics are among those sites which have been chosen to participate. One MCO has worked with a practice to develop a medical home for high-risk pregnant women. The Centennial Care proposal continues the support for medical homes.

Other states have effectively used Medicaid to deliver a range of services to improve health and child development. Several states, including Colorado, Wisconsin, North Carolina, Florida, and Ohio, have begun to develop and pilot programs to serve the medical needs of pregnant mothers and their children through a medical home model.

As part of Medicaid reform, additional focus on prevention and early intensive services for at-risk families is needed. Developing a system which promotes early prevention and intervention will result in near-term benefits such as decreased utilization of emergency rooms. Children account for a significant portion of emergency room visit spending in Salud!, New Mexico's Medicaid managed care program. In FY09, over $60 million, or 53 percent, of emergency room spending was for children.

In general, children stay enrolled in Medicaid over time, justifying prevention investments. According to HSD, 75 percent of children in Bernalillo and Doña Ana counties remained enrolled in Medicaid 36 months after birth. The greatest enrollment loss occurs within the first year. However, only about one-third of mothers remained on the program after delivery.

Home visiting services offer intensive support to at-risk pregnant women and new families, reduce adverse childhood experiences such as child abuse and neglect, and reduce health care costs. New Mexico's Medicaid program does not fund evidence-based intensive home visiting programs.

State Home Visiting Programs and Medicaid Financing Mechanisms

State	HV Program Name	Medicaid Financing Mechanism
IL	Family Case Management	Administrative Case Management
KY	HANDS	Targeted Case Management
MI	Maternal & Infant Health Program	Traditional Medicaid Service
MN	Family Home Visiting	Managed Care
VT	CIS Nursing & Family Support	Global § 1115 Waiver
WA	First Steps	Targeted Case Management & Traditional Medicaid Service

Source: PEW and NASHP

Twelve counties in the state do not have any CYFD funded home visiting programs.

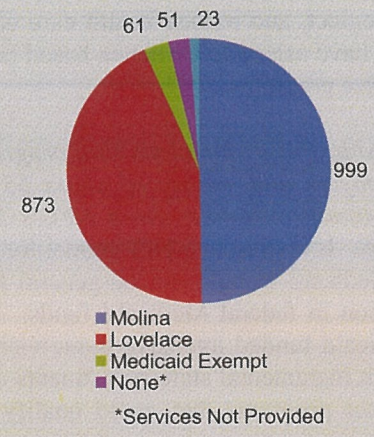
Families at-risk of multiple adverse childhood experiences lack access to Medicaid intensive prevention services, such as evidenced-based home visiting programs. Evidence-based home visiting programs can demonstrate cost-effectiveness and a return on investment, when implemented with fidelity. Home visiting services offer intensive support to at-risk pregnant women and new families, reduce adverse childhood experiences such as child abuse and neglect, and reduce health care costs. However, few families in New Mexico have access to evidence-based home visiting, and Medicaid does not fund these programs.

Investments in Nurse-Family Partnership (NFP) home visiting programs could yield long-term returns to taxpayers and society of about $5 for every dollar invested, based on preliminary estimates from LFC's New Mexico Results First cost-benefit model. Investing in a NFP model for just 2,600 of the highest risk families in Medicaid would cost the general fund an estimated $2 million and $6.8 million in federal Medicaid funds. The provider capacity to implement a Medicaid funded intensive home visiting service would need to be expanded with incremental state investments over a two year to three year period. Other programs that could qualify for Medicaid funding might also generate a positive return on investment. Programs without a medical component are more appropriately funded though other agencies and programs, such as CYFD. For example, some strong, evidence-based home visiting programs are geared towards reducing child abuse and would more appropriately help CYFD achieve their mission. The system would benefit through reduced costs by avoiding foster care and crime and improving early cognitive development and educational attainment

KEY RECOMMENDATIONS

The Human Services Department should

- Direct MCOs to collect information on health risk assessments to identify barriers for late entry into prenatal care so corrective measures can be implemented.
- Direct MCOs to collect, review, and report data from hospitals on complicated deliveries and compromised infants to determine if actions are needed to improve performance.
- Implement information system changes to allow data to be easily retrieved for use in analyzing data by subsets of populations and services rendered, including children zero to three years of age, number of pre-term deliveries, and reason.
- Require the use of validated, standardized screening and assessment tools, specifically for child developmental delays and maternal depression.
- Effectively use medical homes focused on maternal and infant care as part of its Medicaid reform. Community health centers should be at the forefront of this reform effort in many areas of the state.
- Work with the federal Centers for Medicare and Medicaid Services to amend the state plan or apply for a waiver to offer medical-based intensive home visiting services to first-time, at-risk mothers. Given the cost of this service and need for it to be



Source: DOH

well targeted, HSD should consider allowing MCOs to require prior approval before authorizing providers to deliver care.

- DOH should begin converting at least a portion of its Families FIRST program to offer nurse-based home visiting services. DOH should begin with underserved areas of the state that do not have evidence-based home visiting using early childhood investment zone data.

The Managed Care Organizations should

- Require hospitals to report elective pre-term deliveries as a performance measure so trend data can be collected on providers and hospitals.

Importance of early childhood. Strong evidence supports the need for early health interventions for pregnant women and young children. According to the Harvard Center on the Developing Child, "An extensive body of evidence now shows that many of the chronic diseases in adults, such as hypertension, diabetes, cardiovascular disease and stroke, are aligned to processes and experiences occurring decades before, in some cases as early as prenatally. Sound health provides a foundation for the construction of sturdy brain architecture and associated achievement of a broad range of abilities and learning capacities." To make meaningful changes in long-term child development outcomes it is critical to begin early childhood interventions as soon as possible, including prenatal services for pregnant women.

Risk factors impacting child development in New Mexico. Harvard acknowledges the challenges faced by states in developing a system of care which results in outcome improvement: matching supports and services to the needs and strengths of children and families to be served; paying careful attention to the quality of implementation when effective model programs are taken to scale; developing new intervention strategies for children and families for whom conventional approaches appear to have minimal impact; and providing an environment that supports ongoing, constructive evaluation and continuous program improvement.

New Mexico has a high concentration of these risk factors affecting pregnant women and children, many of whom are served by the New Mexico Medicaid program. Poverty, low levels of parental education, lack of social supports, and undetected health problems are risk factors which contribute to health and developmental delays.

Table 1. Risk Factors for New Mexico's Children

Children living in poverty	30%
Children living in extreme poverty	13%
Mothers completing high school	22%
Births to single mothers in	53%

Source: 2008 Children's Defense Fund, DOH

Child well-being rankings. The well-being of New Mexico's young children is ranked low by many child advocacy organizations. For example, Zero to Three: The National Center for Infants, Toddlers, and Families, compiles data measuring state-level health and social data on the status of young children. Zero to Three's ranking for New Mexico are

- 46th in child well-being compared to all other states;
- 25 percent of all maltreated children are under three years of age;
- 75 percent of young children have at least one risk factor known to increase poor health, school, and developmental outcomes; and
- 23 percent of children are at moderate or high risk for developmental or behavioral problems.

The Center for Children in Poverty's assessment of risk for New Mexico's young children is consistent with the Zero to Three report. The Annie E. Casey Foundation's latest report ranks the health and welfare of New Mexico's young children 49th compared with all other states.

An August 2011 presentation to the Legislative Finance Committee (LFC), based upon 2007 Department of Health (DOH) data, identified issues placing New Mexico's children at-risk compared with other states: teen pregnancies, late prenatal care, low birth-weights, and children living in poverty. The report also highlights regional and ethnic disparities. Each of the risks and disparities remain major issues for New Mexico.

Teen Pregnancy. The teen pregnancy rate in New Mexico is second highest in the nation. From FY09 to FY11, Medicaid managed care paid for 4,417 teen mother births. Teen births in New Mexico vary by geographic regions. According to the DOH, the southeast and southwest regions have incidence rates nearly double that of the northern regions. Also, Hispanics account for 70 percent of the births in the teen age group in New Mexico and nationally.

Of the infants born in FY10, 169 were second or third births for the same mother within a three-year period of time. The rate of subsequent teen births in New Mexico, by age or ethnicity, does not differ from other states.

Table 2. Rate of Subsequent Births by Age, 2010

Population	New Mexico	United States
Girls 15 to 17 years old	9%	9%
Girls 18 to 19 years old	24%	22%

Source: CDC

According to the Center for Disease Control (CDC), only 50 percent of teen mothers receive a high school diploma by 22 years of age. The children of teen mothers are more likely to have lower school achievement, have more health problems, be incarcerated at some time during adolescence or young adulthood, and face unemployment as a young adult.

Pregnant teens are less likely to seek early prenatal care, hoping to delay knowledge of the pregnancy, are less likely to have access to prenatal vitamins which prevent birth defects, have body structures that have not matured for the birthing process, and have a higher risk of pregnancy-induced hypertension.

Teen childbearing is associated with adverse consequences for the teen and the child born to the teen and is costly to the public sector. According to the CDC, teen pregnancies cost taxpayers $11 billion annually for health care, foster care, increased incarceration rates for children of teen parents, and lost revenue caused by lower educational attainment and income among teen mothers.

Based upon 2008 New Mexico data, the CDC attributes teen pregnancy costs to New Mexico taxpayers at $118 million, of which 48 percent were federal costs and 52 percent were state costs. Most of the costs are associated with the negative consequences for the children of teen mothers. The calculated costs include $35 million for public health care, of which a greater percentage is Medicaid, $8 million for child welfare, $17 million in incarceration costs for children who reached adolescence or young adulthood, and $38 million in lost tax revenue due to decreased earnings and spending.

Substance Abuse. A 2009 Senate Joint Memorial directed the Governor's Women's Health Council to create a task force to develop a comprehensive plan for the state to address the needs of pregnant and postpartum women with substance abuse problems and the well-being of their children and families. The report focused on the need to reduce unnecessary referrals to the Children, Youth, and Families Department (CYFD) and to increase home visitation, to provide substance abuse and family planning services, to treat rather than incarcerate non-violent drug crimes, and to increase research and data collection.

Early childhood programs in New Mexico. In 2008, early childhood programs funded by the state and federally totaled $300 million. In spite of the investment, early childhood programs have not significantly impacted the risks or health outcomes faced by New Mexico's children. In the past three years, the Legislature has received several reports describing strategies to improve outcomes for children. In 2009, two LFC program evaluations recommended how state agencies, specifically Medicaid, could improve services, reform payment strategies, and guide the development of a comprehensive system of care for pregnant women and young children. In 2011, a program evaluation of the Protective Services Division (PSD) of the CYFD recommended collaboration between

PSD's in-home services and CYFD's home visiting program. The LFC has been making recommendations for system improvement and funding increases, including:

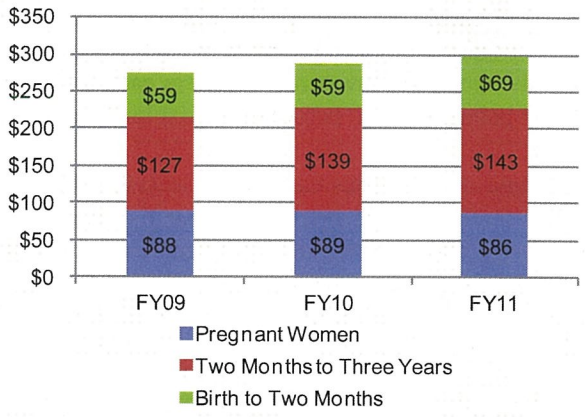
- Working with LFC and DFA to overhaul child and maternal health performance measures on an annual and quarterly basis, with a focus on outcomes associated with higher cost clients (2009).
- Annual reporting to the Legislature on spending and performance outcomes of early childhood programs (2009).
- Implementing a strategic plan for an early childhood system (2009).
- Incorporating outcomes, standards, and performance measures into the administration of home visiting programs and requiring all contractors to comply (2009).

APPENDIX C includes additional data on the status of New Mexico's children and families.

Medicaid program overview. The purpose of the New Mexico Medicaid program is to provide no or low cost health insurance coverage to eligible residents. The program serves over one-quarter of the state's population at a projected cost of $4 billion. In FY11, Medicaid funded services for 20,498 pregnant women and 71 percent of New Mexico's births. The program had 323 thousand child enrollees, birth to 21 years of age.

In FY11, managed care organizations (MCOs) reported spending over $298 million on services for pregnant women and young children (newborn to three years old). Medicaid funds basic acute medical care, such as hospital and physician services, and a limited number of intensive services for pregnant women and young children. Some intensive services, such as newborn and pediatric intensive care units are costly, though at times, preventable.

Graph 1. Total MCO Expenditures for Pregnant Women and Young Children, Ages Zero to Three Years, FY09-FY11

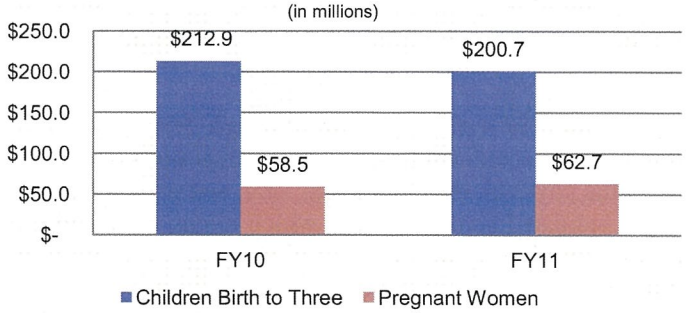


Source: MCO Reported Data

Some women, enrolled in other eligibility categories, were pregnant and delivered babies not captured in either of the two categories of eligibility discussed below. As a result capitation payments, also referred to as premiums, paid to MCOs for these populations are understated. For FY11, the Human Services Department (HSD) reported paying $201 million in premiums to managed care organizations to cover basic health care costs for over 106 thousand newborn to three-year old children. The HSD paid almost $63 million in premiums for 14 thousand women enrolled in the pregnancy-only category of eligibility. Information specific to services for all pregnant women and newborns is not easily extracted from Medicaid's data warehouse.

Graph 2. HSD Capitations to MCOs for Children Birth to Three and Pregnant Women, FY10-FY11

(in millions)



Source: HSD

The most frequent reasons for hospitalizations of children from birth to three are fairly consistent across MCOS: normal vaginal deliveries, Cesarean sections (c-sections), respiratory infections, and pre-term infants. In FY11, MCOs paid $58.6 million for these inpatient stay diagnoses. FY11 expenses for the top five most frequent outpatient visits totaled $21 million. Again, the most frequent diagnoses were common to all MCOs: routine child checks, respiratory infections, ear infections, unspecified fever, and other infections.

MEDICAID HAS THE FUNDING LEVERAGE TO IMPROVE HEALTH AND DECREASE LONG-TERM COSTS

Medicaid, enrolling an estimated 62 percent of children in the state and paying for 71 percent of births, plays a major role improving child health and development. According to the DOH, between 1999 and 2005 Medicaid paid for about 55 percent of births in the state. In 2010, Medicaid covered 19,863 births, or 71 percent of the 27,795 births in New Mexico. In addition, Medicaid enrolls 323 thousand children overall, and an estimated 125 thousand children up to age three. As a result, Medicaid performance related to prenatal and other child and maternal health indicators should be expected to have a significant impact on the state's overall health care quality.

Medicaid is positioned to set the standard for improved health outcomes for all New Mexico's pregnant women and young children. The importance of ensuring quality care to pregnant women and young children is emphasized when reviewing the March of Dimes state data snapshots of New Mexico. The data shares estimates which make obvious the need for a system of care which dedicate effective resources to the health and well-being of pregnant women and young children:

- 580 babies are born in each week,
- 87 babies are born to teen mothers in each week,
- 133 babies are delivered by Cesarean section in each week,
- 71 babies are born pre-term in each week,
- 49 babies are low birth-weight in each week, and
- 4 babies will die before their first birthday.

Even simple interventions can prevent catastrophic health events, reduce costs, and improve outcomes for children and their mothers. For example, infant risk can be reduced through the administration of folic acid, which is a standard of practice. Folic acid prevents congenital anomalies such as spina bifida, a condition in which a part of the spinal cord and its coverings are exposed through a gap in the spine and could result in damage to the spinal cord and paralyses. In 1998, the CDC found that less than 30 percent of women received folic acid. In 2002, after mandatory folic acid fortification of grains, the prevalence of infant birth defects declined by 19 percent.

Lack of standard screening tools and access to well-child visits hampers efforts to boost identification of delays in child development and target interventions. The American Academy of Pediatrics (AAP) reports that many at-risk children are not identified as having developmental problems prior to school entry. The Medicaid program, and New Mexico in general, does not require a standard screening tool to assess child development. Using a standard, validated screening tool will provide consistency in data reporting ability and identification of the incidence of delay. The incidence of delay will demonstrate if resources for interventions are adequate to meet need. Most importantly, by using an appropriate screening tool, problems can be addressed earlier in the child's development, allowing earlier intervention to be more effective (**see APPENDIX C**).

Envision New Mexico, a program at the University of New Mexico Health Sciences Center, has an initiative "to promote the use of standardized developmental screening and quality improvement tools for early identification and intervention of developmental delays" for children birth to five-years old. This educational program is free to providers.

Over a third of infants do not receive the recommended number of well-child visits through Medicaid. Well-child visits provide the opportunity for providers to meet the federal standards for child screenings and assessments. Recommended visits are scheduled at specific ages to assess the physical, developmental, oral, and mental health of a child. The AAP also prescribes a visit schedule, using a validated screening tool, which aligns with stages of physical and developmental milestones. Development not occurring within an anticipated timeframe alerts the provider and parents of the need for intervention services. The last toddler well-child visit, at 30 months, should also include a comprehensive physical exam and review of immunization needs.

Three MCOs have exceeded HSD's 62 percent target, but many children are still not receiving the recommended visits. In fact, performance for some MCOs appears to have declined over time. Presbyterian reported a rate of less than 63 percent in 2011, down from a high of 69 percent in 2006. Molina reported large improvements, increasing from 50 to almost 67 percent during the same time period. Compliance is measured by the number of children who have received at least six health visits in the first 15 months of life. This is a crucial time period in an infant's physical and developmental stages.

Table 3. Percentage of Compliance for Well Child Visits During the First 15 Months of Life

	2005	2006	2007	2010	2011
Lovelace	24	50	57	58	62
Molina	40	50	63	59	67
Presbyterian	57	69	68	59	64

Source: MCO Reported Data

MCOs have focused on improving the rates of well child visits, and HSD uses this indicator as a key performance measure. MCOs have reported efforts to boost visits through pay-for performance and provider and client incentive programs. For example, Presbyterian reported using $268 thousand to invest in a provider incentive program. However, given the lack of sustained improvement over time by Medicaid, additional approaches are necessary.

Lead poisoning is a chronic, insidious disease that can lead to cognitive impairments and behavioral disorders, but over 75 percent of children on Medicaid are not receiving screenings. Very high lead levels can result in long-term neurological conditions or even death. Medicaid health plan reporting to the National Committee for Quality Assurance (NCQA) for 2009 showed a 66 percent screening rate for two-year olds. The current Centers for Medicare and Medicaid Services (CMS) policy requires all Medicaid eligible children receive testing at 12 months and 24 months. MCOs are far out of compliance with the CMS screening mandates.

Table 4. HEDIS Outcomes for Lead Screening, FY11

MCO	Percent of Compliance	Target
BCBS	20%	12 months and 24 months
PHP	21%	
MHC	28%	
LCHP	23%	

Source: MCO Reported Data

Late and infrequent access to prenatal care undermines efforts to improve birth outcomes and lower Medicaid costs for deliveries. Prenatal care is one of the most valuable interventions to improve birth outcomes. In 1985 the Institute of Medicine estimated a return on investment of $3.38 for every dollar spent of effective prenatal care. To have an impact, prenatal care must begin early in a pregnancy and be continuous throughout the pregnancy. Without appropriate monitoring of physical, emotional, and dental health during a pregnancy, women can encounter complications resulting from conditions such as depression, infections, hypertension, gestational diabetes, and even maternal demise. Consequences for infants born to mothers who have not received prenatal care include infection transfer, pre-term delivery, low birth-weights, congenital anomalies, and mortality.

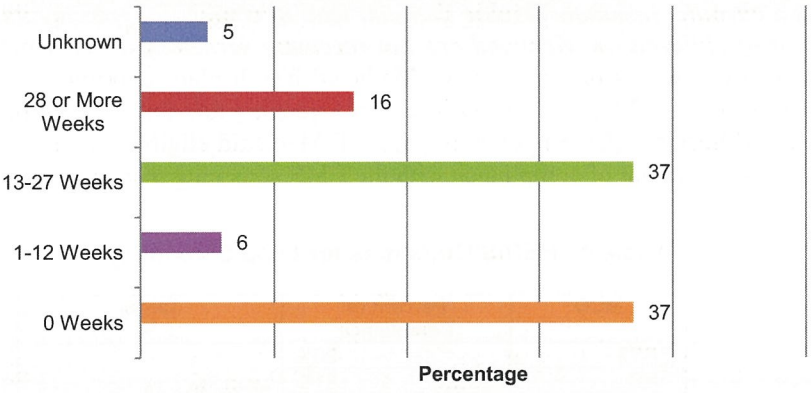
According to the NCQA, more than 11 percent of pregnant women receive inadequate prenatal care each year. Further, women who failed to receive prenatal care were almost three times more likely to have low birth-weight infants than women who had care, resulting in expected hospital cost savings of more than $1,000 for women who received prenatal care. Women who receive only the minimal amount of prenatal care are at high risk for pregnancy complication and negative birth outcomes.

Dental care should be integral to prenatal care as well. According to the Journal of Oral Health, periodontal disease affects up to 40 percent of pregnant women. Infections, including sepsis, caused by dental disease can be debilitating to the pregnant woman or be transmitted to the unborn child. Recent studies suggest a link between poor dental health and low birth-weight infants and premature births. These conditions show the importance of early and regular dental examinations. However, data is not reported for prenatal dental visits in Medicaid.

More than half of pregnant women enrolled in Medicaid managed care enter prenatal care after the 13th week of pregnancy. Previous LFC reports have highlighted New Mexico and the Medicaid program's persistently low rates of women who receive full prenatal care. For example, only 62 percent of women receive prenatal care in their first trimester in the state in 2008, down from 69 percent in 2004. The national average was 71 percent in 2008. The state's high teen pregnancy rates contribute to this, but it appears that enrollment delays into Medicaid and thus managed care can also contribute to delayed access to prenatal care. Existing delays in the transitioning of pregnant women from the fee-for-service program to managed care will be mostly resolved with the implementation of Centennial Care. Individuals will be asked to choose an MCO upon application to Medicaid, eliminating the time gaps experienced in the transition from one program to another.

In other cases, women may be applying for assistance later in their pregnancy. Medicaid has not determined the cause of delays so appropriate improvement strategies have not been implemented.

Graph 3. Average Percentage of Women Enrolling in New Mexico's MCOs, by Weeks of Pregnancy, 2011



Source: HEDIS

The need for early prenatal care is evidenced by the rapid pace of fetal development. At week 12 of pregnancy, the basic development of body structures is nearing an end as most of the baby's systems are fully formed.

APPENDIX D provides additional information on fetal development and barriers to accessing prenatal care based on national research.

Once enrolled, 80 percent to 87 percent of pregnant women access timely prenatal care, but significantly fewer receive the recommended frequency of visits. Only one of the MCOs met the timeliness and frequency performance standards for prenatal care. Timeliness and frequency of prenatal care are strong determinants of infant and mother health outcomes. Timeliness measures at what trimester pregnant women begin receiving care. The frequency identifies the number of prenatal care visits during the pregnancy. Both timeliness and frequency are HSD reportable performance measures for MCOs.

Since 2007, MCOs have improved: between 76 percent and 87 percent of women received a timely prenatal visit. The 2007 Medicaid national average was 81 percent, with commercial plans achieving an average of about 91 percent. Also, in 2007, between 45 percent and 68 percent of enrollees received the recommended frequency of

prenatal care. Again, MCOs appear to be improving modestly over time. However, Presbyterian's low rates of women receiving the recommended frequency of prenatal visits is concerning given this plan has the largest enrollment.

Table: 5. HEDIS MCO Prenatal Care Performance Measures, FY11

MCO	Timeliness	Percentage	Frequency	Percentage
Molina	Partially Met	82	Met	69
Presbyterian	Not Met	80	Partially Met	56
Lovelace	Partially Met	83	Met	74
Blue Cross/ Blue Shield	Met	87	Met	71

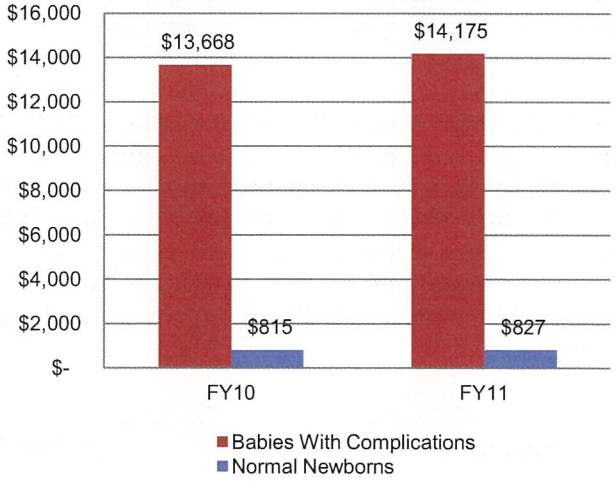
Source: HSD

Complications with deliveries and newborns result in significantly higher costs. According to two MCOs, newborns with complications on average cost over $14 thousand compared with peer costs of less than $900. In FY11, 35 percent of infants were identified by the billing hospital as having complications, a 5 percent increase from the previous year by just two of the four MCOs.

Services and interventions that improve the rates of normal delivery and babies without complications reduce health care spending. After LFC recommendations in 2009, MCOs now track low birth rate data and its association with timely and appropriate access to prenatal care. According to Molina, in 2010, women who had timely access to prenatal care had only five cases of low birth-weight babies out of 2,428 deliveries, and none in 2011. Similarly, only 6 percent of Presbyterian's deliveries had low birth-weights for women accessing timely prenatal care. MCOs are seeking to improve birth outcomes through timely and accessible prenatal care.

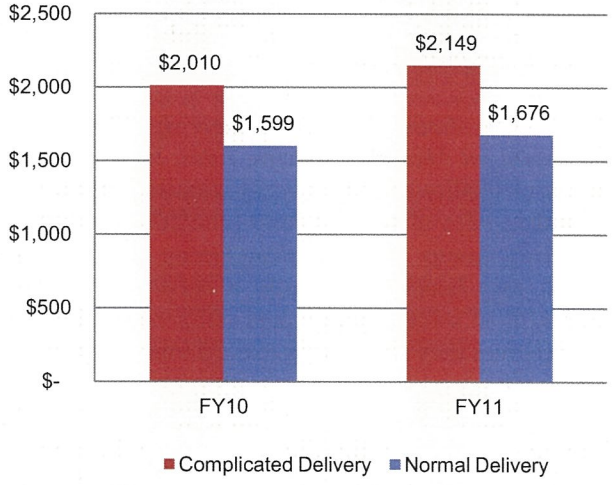
Hospital delivery costs are impacted if the mother's delivery is complicated. The average hospital cost per delivery in FY11 was $1,676, up 5 percent from FY10. In contrast, the average cost of a complicated delivery was $2,149, or 30 percent higher than a normal delivery in FY11. Nationally, the cost difference is 25 percent.

Graph 4. Average Cost of Babies with Complications vs. Normal Newborns for New Mexico's MCOs*, FY10 and FY11



* Data reported for PHP and BCHP only

Graph 5. Average Cost of Complicated Delivery vs. Normal Delivery for New Mexico's MCOs*, FY10 and FY11



*Data reported for LHP and MHP only
Source: MCOs

In FY11, according to data from two Medicaid MCOs, 46 percent of births had complications. Complicated deliveries resulted in higher hospital costs, primarily due to longer length of stay. Reported costs vary across the state, from a low at Los Alamos Medical Center to higher-than-average costs at the University of New Mexico Hospital (UNMH). As a statewide referral center and public hospital, UNMH receives patients from around the state who require more intensive services and often lack insurance or prenatal care. These hospital costs do not include other payments to providers, such as the doctor. Reimbursement for services is determined by price negotiations between MCOs and the providers in their network.

Although the newborn intensive care system in New Mexico contributes to the state's low infant mortality rate, it is costly. The state has the 35th lowest infant mortality rate at 6.1 per 1,000 infants. New Mexico's system for intensive inpatient services for children has established regional institutions designated for specific levels of newborn intensive care and a system to transport mothers or infants to intensive services. MCO's reported 1,090 admissions to Newborn Intensive Care Units (NICU) in FY11, representing 7 percent of all managed care sponsored births.

Babies born prematurely are at-risk for health problems, but the risk for serious complications increases as the term of the pregnancy decreases. A pre-term delivery is medically defined as a delivery occurring before 37 weeks of pregnancy. In New Mexico, 12.3 percent of births were pre-term in 2011 (see **APPENDIX E).**

Babies who are delivered prematurely could face a number of challenges during early childhood and into adulthood, including low birth-weight, underdeveloped organs, greater risk for life-threatening infections, vision impairment or loss, increased risk for cerebral palsy, bleeding into the brain, heart disease, and greater risk for learning and developmental disabilities. Pre-term birth is the leading cause of infant mortality in the United States.

The associated adverse health outcomes for pre-term babies costs Medicaid programs an estimated average of $20 thousand in medical care during first year of life compared to $2,100 for full-term infants. Infants born pre-term are at-risk for higher rates of serious health problems, intellectual disabilities, and learning and behavioral problems which may require expensive early intervention services. The higher costs of non-medically indicated pre-term deliveries can be driven by the increased likelihood of the baby's placement in a newborn in the NICU.

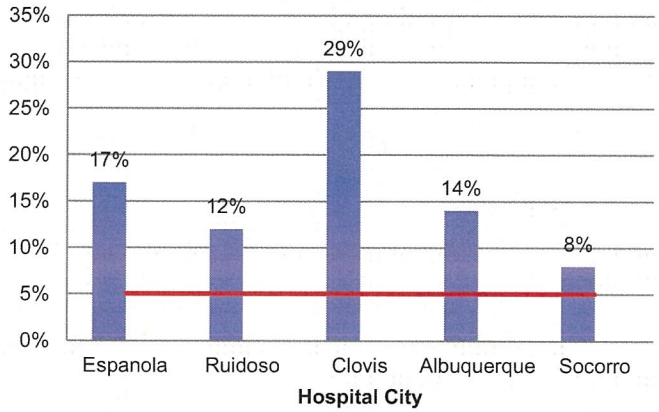
A study cited by the March of Dimes found that Cesarean sections (c-sections) account for nearly all of the increase in premature births of single infants in the United States. In New Mexico, the rate of babies born through c-sections increased by 35 percent during the period from 1996 to 2007. Although there are medical reasons for a c-section, the procedure poses serious health and safety risks for mothers and newborns. C-sections typically extend hospital stays by three to five days, if there are no complications. Extended recovery time, ranging from weeks to months, can impact bonding time with the baby. Hospital charges for c-sections are almost double those for vaginal deliveries.

Some New Mexico hospitals report significantly higher rates of elective early deliveries, but Medicaid MCO's lack data on Medicaid specific rates, limiting opportunities for improvement. Hospitals voluntarily report on a series of quality-of-care process measures, resource utilization measures, and other safety performance measures, including rates of elective early scheduled deliveries. In 2011, five New Mexico hospitals reported this data to the Leapfrog Group. The Leapfrog Group, a national non-profit organization driven by employers and purchasers of health care benefits, conducts a survey of hospitals and makes comparisons of performance on the national standards of safety, quality, and efficiency. The survey also provides hospitals with the opportunity to benchmark the progress they are making toward improving delivery of care.

All five of the reporting hospitals in the state had rates higher than the target rate set by the Leapfrog Group; however, four of the five hospitals reported a lower rate of elective early scheduled deliveries in 2011 than they did in 2010. The exception is the hospital located in Clovis.

Despite HSD billing code changes in 2011 to pay providers who perform medically unnecessary c-sections at the same rate as vaginal deliveries, New Mexico's MCOs are unable to accurately determine the number of elective pre-term deliveries.

Graph 6. Self-Reported Hospital Rates of Elective Early Scheduled Deliveries, Select New Mexico Hospitals, 2011
(target rate=5%)



Source: Leap Frog Group Hospital Survey 2011

Other states are also focusing on decreasing pre-term deliveries. The South Carolina Department of Health and Human Services, for example, established tracking billing code modifiers that hospitals and providers must use to track occurrences of non-medically necessary early deliveries. In partnership with the South Carolina Hospital Association, the March of Dimes, other state agencies, public and private providers and payers, consumers and advocacy groups, the department led an effort to reduce the number of low birth-weight babies in South Carolina. One of the first steps towards this goal was securing a written commitment from all 43 birthing hospitals to end the practice of elective deliveries and elective inductions prior to 39 weeks gestation. Effective for dates of service on or after August 1, 2012, providers in South Carolina are required to bill using modifiers signifying a birth occurred at:

- 39 weeks gestation or more, regardless of method of delivery;
- Less than 39 weeks gestation, with mandated documentation justifying the early delivery; or
- Elective non-medically necessary deliveries less than 39 weeks gestation.

Also, Texas passed legislation which requires hospitals and physicians to limit elective deliveries, including both inductions and c-sections, prior to 39 weeks gestation unless medically indicated. As of September 2011, Texas Medicaid no longer reimburses hospitals for elective deliveries occurring before 39 weeks which are not medically necessary and properly documented as such.

Medicaid, and the state in general, lacks a standard screening tool or assessment process for providers to identify maternal depression, which can negatively impact health care costs and the cognitive development of children. Depression is the most common form of mental illness and has negative impacts on all aspects of an individual's life, including work and family. While depression is commonly thought of and discussed as an adult problem, research consistently shows adult depression is also bad for children. Maternal depression can affect children's development in toddlerhood and childhood stages. Children of depressed mothers may act out more, have problems learning, have difficulty forming friendships, and have difficulty getting along with peers. When maternal depression exists with other risk factors during a baby's first year, the likelihood increases that a child will show significant behavioral, attention, or anxiety problems by age three.

Three-year-old children whose mothers were depressed during their child's infancy performed worse on cognitive and behavioral tasks compared to children of mothers who did not have depression. Also, depressed mothers are more likely to miss routine pediatric and will-child visits, use the emergency room as a routine source of care for their children, and smoke cigarettes.

Studies in New Mexico find 11 percent to 23 percent of women are at-risk for postpartum depression. Many studies conclude parents are at a higher risk for depression in the first year after the birth of their child and parents with a history of depression, younger parents, and parents from deprived areas are particularly vulnerable to depression. Based on depression rates and Medicaid enrollment rates, an estimated 2,100 to 4,400 mothers and their children on Medicaid each year are at-risk for the consequences of untreated maternal depression. It should be noted that maternal depression also includes perinatal depression and depression after the postpartum period.

Recommendations

The Human Services Department should

Direct MCOs to collect information on health risk assessments to identify barriers for late entry into prenatal care so corrective measures can be implemented.

Direct MCOs to collect, review, and report data from hospitals on complicated deliveries and compromised infants to determine if actions are needed to improve performance.

Implement information system changes to allow data to be easily retrieved for use in analyzing subsets of populations and services rendered, including children zero to three years of age, number of pre-term deliveries, and reason.

Direct the use of validated, standardized screening and assessment tools, specifically for child developmental delays and maternal depression.

Update agency-issued prevention guidelines to align with federal and professional organization recommendations.

Use DOH epidemiological data to direct MCOs to target interventions towards geographic areas experiencing poor outcomes for pregnant women and young children.

Direct MCOS to require pediatric practices, especially those designated as medical homes, to complete Envision New Mexico provider training.

The Managed Care Organizations should

Require hospitals to report elective pre-term deliveries as a performance measure so trend data can be collected on providers and hospitals.

IMPROVING LONG-TERM OUTCOMES FOR CHILDREN WILL REQUIRE MEDICAID INVESTMENTS IN EARLY AND INTENSIVE PREVENTION EFFORTS

The Medicaid program makes available a range of strategies and services to meet the needs of low-income New Mexicans. Aside from basic acute medical care, the state has implemented numerous programs and strategies to improve the health and well-being of needy children, adults, and people with disabilities. Medicaid is now primarily delivered through a managed care arrangement for most clients in an effort to improve quality of care and contain costs. This arrangement allows the private sector to develop, manage, and oversee a network of medical providers, hospitals, and nursing homes for a fixed payment per person from the state. Medicaid also funds other optional services, such as community-based supports for people with developmental disabilities, and intensive and targeted intervention services, such as the Family Infant Toddler (FIT) program.

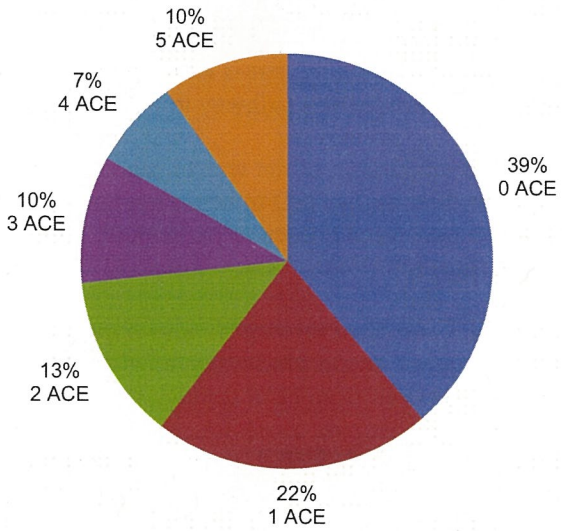
The HSD's Centennial Care proposal to reform Medicaid offers opportunities to refocus the system on patient-centered care and value-driven purchasing. The HSD reaffirms a commitment to quality in the recent waiver request to CMS. One of the four program goals is "to assure that the care being purchased by the program is measured in terms of its quality and not its quantity." The department's waiver concept paper acknowledges the state has not necessarily been buying quality, but that rates and payments are based on the quantity of services offered.

The goals of the Centennial Care program are: assuring Medicaid recipients in the program receive the right amount of care at the right time and in the most cost effective or "right" settings; ensuring the care being purchased by the program is measured in terms of its quality and not its quantity; slowing the growth rate of costs or "bending the curve" over time without cutting services; changing eligibility or reducing provider rates; and stream-lining and modernizing the Medicaid program.

The Children's Cabinet has identified central challenges, including child well-being and school readiness, which must be improved to benefit the state's young people. Key goals include using home visiting programs to improve birth outcomes and prenatal care. In addition, attention is placed on improving literacy levels of children through school readiness initiatives such as Early Learning Guidelines. See **APPENDIX F** for additional detail.

Some children on Medicaid have higher risk factors for multiple adverse childhood experiences, which have life-long negative health, social, and cognitive impacts and require intensive prevention services. The state can save money over the long-term if Medicaid helps to address and even prevent exposure to multiple adverse childhood experiences (ACE). ACE include sexual, physical, and verbal abuse; substance abuse in household; and witness to domestic violence, among others. The CDC and Kaiser Permanente study of 17 thousand individuals in New Mexico, Louisiana, Arkansas, Tennessee, and Washington revealed a strong correlation between ACE and childhood trauma and health, social, and economic risk. The study concludes a high prevalence of ACE leads to several health and social issues, including alcoholism, depression, fetal demise, illicit drug use, heart disease, multiple sexual partners, sexually transmitted diseases, smoking, unintended pregnancies, and adolescent pregnancies. Curbing the impact of ACE requires early and consistent interventions.

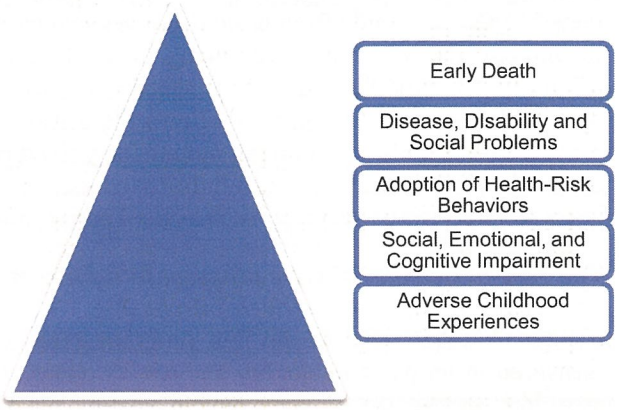
Graph 7. Percent of New Mexicans Reporting ACE



Source: ACE Study

Almost 20 percent of surveyed New Mexicans reported four or more adverse childhood experiences (ACE). New Mexicans with four or more ACE were more likely to have poor mental health, have asthma, binge drink, drink heavily, and were less likely to have health insurance than adults with zero ACE. The most reported ACE from the New Mexican population was living with substance abusing household members. Additional information on ACE in New Mexico can be found in **APPENDIX G**.

The more ACE an individual is exposed to in early childhood results in increasingly more drastic outcomes. The study provides evidence that funding early health interventions for pregnant women and young children might prevent adverse health outcomes and decrease healthcare and other costs to taxpayers and society.



Families with complex needs require additional targeted Medicaid assistance, though the program lacks some of these needed services. Centennial Care anticipates improving the coordination of care for many Medicaid clients, particularly those with chronic or high medical costs to improve quality and control spending. A number of existing or additional strategies are needed to accomplish this across a spectrum of intensity, including using traditional managed care and patient education, care coordination, medical homes, and disease management programs.

Access to medical homes in New Mexico lags behind national rates, particularly among populations most at-risk, according the Child and Adolescent Health Measurement Initiative. While 49 percent of all children ages zero to 17 years have access to healthcare that meets the American Academy of Pediatrics (AAP) criteria for medical homes, differences in medical home access exist along ethnic and socioeconomic lines: 30 percent of children from families with income levels below the federal poverty level have access to medical homes in New Mexico, compared with 39 percent nationwide; 39 percent of New Mexico's Medicaid recipients have access to medical care meeting the AAP criteria, compared with 45 percent of all Medicaid recipients nationwide.

A Medical home is a health care model in which individuals use primary care practices as the basis for accessible, continuous, comprehensive, family-centered, and integrated care. Unlike a fee-for-service delivery model, medical homes aim to provide patients with a broad spectrum of care, both preventive and curative, over time through service coordination. Care is coordinated across all elements of the health care system and the patient's community. It is a model that is endorsed by professional organizations, payers, and governmental agencies. The model shows promise as a pathway to improve primary health care quality, efficiency, and effectiveness.

Prior to the submission of the waiver request, the MCOs, through pay-for-performance dollars from the Challenge Fund, were directed by HSD to begin implementation of medical homes. Pediatric practice clinics are among those sites which have been chosen to participate. One MCO has worked with a practice to develop a medical home for high-risk pregnant women. The Centennial Care proposal continues the support for medical homes.

Attention on maternal medical homes appears warranted given less than desirable outcomes in the state. The FOCUS program at the University of New Mexico Health Sciences Center provides supports and services for families of children from birth through three years of age who are at-risk for or are experiencing a developmental delay. Services include those for medical challenges, including pre-term birth, low birth-weight, and pre-natal exposure to drugs and alcohol, in addition to services for environmental challenges, including family and substance abuse. FOCUS is funded through the DOH FIT program and provides a continuum of integrated primary and specialized care, including home visiting and developmental guidance, case management, primary care, a family medical home, and community referrals.

Medicaid currently funds a targeted case management service, such as those provided by the DOH Families FIRST program, to help clients access an array of other supports. CMS defines case management as medical assistance services that help beneficiaries gain access to medical, social, educational, and other services. Targeted Case Management (TCM) includes four components: assessment services, development of a care plan, referrals and scheduling, and monitoring and follow-up for Medicaid enrollees. Case managers can meet with clients in a home setting, but this is not considered the same as intensive home visiting programs, which provide additional services more frequently.

TCM may be provided through the DOH Families FIRST program or similar programs. Three of the four MCOs have contracts with Families FIRST, as well as offering similar services provided to their members through other services or contracts (**see APPENDIX H**). Presbyterian Health Plan no longer contracts with Families FIRST, but employs a case management model known as *PREScious Beginnings* for Salud! pregnant women. This change has significant budget ramifications for Families FIRST.

Although TCM helps Medicaid-eligible pregnant women and children up to the age of three get medical, social, and educational services, they are are not as comprehensive as home visiting. HSD rule limits case management services to four hours per year for children from birth to age three and five hours of case management per Medicaid enrollee per pregnancy. Services typically end 60 days after the delivery takes place.

TCM does not support Families FIRST to provide the frequent visits that are normally associated with intensive home visiting. In 2010, Families FIRST served a total of 3,077 clients: 1,262 were prenatal clients and 1,814 were children zero to three years of age. Services were provided at 23 locations around the state and each care coordinator had caseloads of 150 to 200 clients, allowing clients to be seen an average of once every three months to four months.

As part of Medicaid reform, additional focus on prevention and early intensive services for at-risk families is needed. Developing a system which promotes early prevention and intervention will result in near-term benefits such as decreased utilization of emergency rooms, decreased inpatient admissions, and decreased harm and abuse. Medicaid reimbursement is geared to individual services, not a coordinated system to allow providers to deliver the right services at the right time to at-risk women and children. For example, one MCO reported over 50 percent of enrolled one year to two year old children accessed the emergency room in FY11. Children account for a significant portion of emergency room visit spending in Salud!. In FY09, over $60 million, or 53 percent, of emergency room spending was for children. Overall in FY09, MCOs reported emergency room spending was $112 million, 12 percent of all medical expenses.

In general, children stay enrolled in Medicaid over time, justifying prevention investments. According to HSD, 75 percent of children in Bernalillo and Doña Ana counties remained enrolled in Medicaid 36 months after birth. The greatest enrollment loss occurs within the first year. However, only about one-third of mothers remained on the program after delivery.

Table 6. Medicaid Eligibility Retention for Young Children and Pregnant Women

County	Original Number of Enrollees	Maintained After 36 Months	Percent of Original Enrollees
Bernalillo children	4,520	3,527	78%
Bernalillo mothers	4,683	1,555	34%
Doña Ana children	1,909	1,523	79%
Doña Ana mothers	1,853	645	35%

Source: HSD

Centennial Care focuses on costly clients and populations, but a balanced approach to investments in generally lower cost pregnant women and very young children are still beneficial. The state has appropriately focused on care coordination services for the elderly and people with disabilities, similar to case management, in an effort to identify needs and offer lower-cost living arrangements and services through the Coordination of Long Term Care program (CoLTS). Absent in the system is a means to provide inclusive, well-coordinated early interventions to prevent future health and societal problems. The state should take a broader view of the system of care for pregnant women and infants to ensure supporting the most at-risk populations with a comprehensive array of services.

Families at-risk of multiple adverse childhood experiences lack access to Medicaid intensive prevention services, such as evidenced-based professional home visiting programs. Evidence-based home visiting programs can demonstrate cost-effectiveness and a return on investment, when implemented with fidelity. Home visiting models that are intensive (weekly visits), targeted to at-risk children, and contain a medical component have a higher per-child cost, but have been shown to have the highest return on investment.

Home visiting services offer intensive support to at-risk pregnant women and new families, reduce adverse childhood experiences, and reduce health care costs. The services can lead to improved maternal and child health outcomes, positive parenting, safe homes, school readiness, economic self-sufficiency, connections to community services, and reductions in child maltreatment and juvenile delinquency. Intensive home visiting is a service provided by a qualified home visitor within the home to parents, prenatally and/or with children birth to age three. Home visiting is viewed as a delivery strategy for primary prevention services that are informational, developmental, and educational. According to Pew Center on the States, "home visiting programs not only improve the short-term health of children and mothers, they also reduce overall health care expenditures due to chronic disease later in life. The purchasing power of Medicaid can be a significant policy lever for promoting program quality and improving health outcomes. "

Few families in New Mexico have access to evidence-based home visiting, and Medicaid does not fund these programs. The FY13 general fund appropriation for home visiting increased from $2.3 million to $3.2 million. In FY11, CYFD's home visiting program provided services to approximately 592 infants, but given the 19 thousand newborns on Medicaid, the level of unmet need is extremely high.

Several models of home visiting exist throughout the state. Only two home visiting programs funded by CYFD in the state are evidence-based with rigorous research demonstrating positive outcomes. CYFD has recently contracted with the UNM Health Sciences Center for implementation of the Nurse-Family Partnership Home Visiting Program (NFP). This program has been adopted by many states and produces evidence of short-term benefits, long-term positive impacts on the health of the family and child, and decreased costs to society as a whole. Parents as Teachers (PAT) is the second evidence-based program, while the First Born program is currently under evaluation to demonstrate evidence of effectiveness and is generally considered a promising program. Other programs funded by CYFD do not meet federal standards for funding.

Investments in Nurse-Family Partnership home visiting programs could yield long-term returns to taxpayers and society of about $5 for every dollar invested, based on preliminary estimates from the LFC's New Mexico Results First cost-benefit model. Other programs that could qualify for Medicaid funding might also generate a positive return on investment. Programs without a medical component are more appropriately funded though other agencies and programs, such as CYFD.

Investing in a NFP model for just 2,600 of the highest risk families in Medicaid would cost the general fund an estimated $2.7 million and $6.7 million in federal Medicaid funds. Therefore, the state general fund would cover approximately 30 percent of the cost per family investment in NFP. The average cost per family per year would be about $3,600 and would require hiring about 104 nurses. There are estimated benefits to taxpayers accrued in lower Medicaid costs, and in other government sectors, including child protective services, public schools, and corrections. The current New Mexico Results First cost-benefit model has some limitations, but was built to err on

the side of providing conservative estimates. Note that the model assumes that best practices are followed in program implementation.

Table 7. New Mexico Results First Model Cost Benefit Analysis for Nurse-Family Partnership
(per participant)

Benefits to Participants	Benefits to Taxpayers	Other Benefits	Total Benefits	Costs	Benefits-Costs	Benefits/Costs
$11,834	$8,642	$13,450	$33,926	($6,374)	$27,551	$5.33

Source: New Mexico Results First Model

LFC staff assume targeting parents of first born children in the first trimester for intensive services and establishing high risk criteria would result in a small target population for services. The estimate assumes serving 1,300 of first-time pregnant women and 1,300 families with one year or two year old children each year on Medicaid, or less than 7 percent of the estimated eligible Medicaid population. Additional information about the New Mexico Results First model and these cost-benefit estimates can be found in **APPENDIX I**.

The provider capacity to implement a Medicaid funded intensive home visiting service would need to be expanded with incremental state investments over a two year to three year period. LFC program evaluations have previously recommended that DOH convert its Families FIRST case management model into an intensive home visiting model, such as NFP. The program already employs nurses and has an established presence in many rural and underserved areas of the state. To date, the recommendation has not been implemented. UNM has started implementing NFP in the south valley of Albuquerque, but could offer another option for expanding the provider capacity where the private sector has gaps.

Other states have effectively used Medicaid to deliver a range of services to improve health and child development. Several states, including Colorado, Wisconsin, North Carolina, Florida, and Ohio, have begun to develop and pilot programs to serve the medical needs of pregnant mothers and their children through a medical home model and report both positive outcomes and cost-saving benefits. In 2011, Wisconsin proposed a state amendment and piloted an initiative to create a medical home for pregnant women receiving fee-for-service Medicaid to reduce the incidence of infant mortality and build healthy families.

North Carolina implemented a Pregnancy Medical Home program in partnership with the state Division of Public Health and the North Carolina Community Care Network, a local non-profit network of hospitals, service providers, and county health departments that aims to improve birth outcomes among mothers receiving Medicaid, particularly those most at-risk for negative birth outcomes. Initiated in 2012, the primary goal of North Carolina's program is to improve the rate of low birth-weight and pre-term births by focusing resources upon pregnancy care management. Pregnancy care management programs involve collaboration among public health programs to ensure that high-risk patients receive care management and chart audits for quality improvement purposes. The program also coordinates post-delivery services, including home visiting and the enrollment in services, such as Women, Infants, and Children (WIC).

Evaluation in North Carolina reveals significant financial gains from the program. North Carolina was able to initiate the program without new appropriations by moving line items in the state's existing budget instead. In the first year of the program's existence, North Carolina saved close to $1 million and projects the program will save $9 million in its second year.

States such as Florida, Louisiana, Oregon, Rhode Island, and Arizona have creatively used Medicaid to effectively reduce rates of prematurity and improve outcomes of pre-term births by financing services that have an impact. These states have targeted specific populations and employed strategies to effectively support healthy pregnancies and improve outcomes for infants on Medicaid. Each program is supported by an innovative arrangement with the state's Medicaid program.

Table 8. State Examples of Using Medicaid to Support Pre-term Birth Prevention

State and Program	Services	Outcomes
Florida's Healthy Start Program	Universal risk screening for all pregnant women and children up to age three, streamlined access to Medicaid for pregnant women, quality standards for Medicaid prenatal services and care management, and other services for at-risk pregnant clients.	Women who received Healthy Start services experienced a 9 percent decreased risk of delivering a low birth-weight infant.
Louisiana's Nurse-Family Partnership Program	Louisiana's Medicaid program includes a Targeted Case Management benefit for pregnant women. Each home visit is billed to Medicaid and reimbursed at approximate cost.	Women enrolled in this program have a 52 percent lower pre-term birth rate than a control group of women.
Oregon's Smoke Free Mothers and Babies Program	Medicaid pays for maternity case management services. The Office of Child and Family Health uses a Smoke-Free Mothers and Babies grant to coach and train a pilot group of maternity case manages in cessation counseling.	In 1996, when the program began, over 31.7% of Medicaid births were to mothers who had smoked during their pregnancy. Five years later, the rates had declined by nearly 28%.
Rhode Island's Rite Care	Medicaid received a waiver from the federal government to extend family planning and primary care coverage from 60 days to up to two years for women who had delivered a baby on Medicaid.	The increased access to family planning cut in half the number of women who delivered another baby within 18 months of a previous pregnancy and reduced infant mortality among Medicaid infants.
Arizona's High-Risk Perinatal Program	Provided access to no-cost perinatalogy consultation for community-based practitioners who have a high-risk patient. The program serves all women in the state and guarantees payment if the patient does not qualify for Medicaid or have private resources.	Survival and infant health are markedly improved when the birth occurs in a facility with specialized staff and equipment.

Source: March of Dimes

Recommendations

The Human Services Department should

Work with the federal Centers for Medicare and Medicaid Services (CMS) to amend the state plan or apply for a waiver to offer medical-based intensive home visiting services to first-time, at-risk mothers. Given the cost of this service and need for it to be well targeted, HSD should also consider allowing MCOs to require prior approval before authorizing providers to deliver care.

Effectively use medical homes focused on maternal and infant care as part of its Medicaid reform. Community health centers should be at the forefront of this reform effort in many areas of the state.

The Department of Health should

Begin converting at least a portion of its Families FIRST program to offer nurse-based home visiting services. DOH should begin with underserved areas of the state that do not have evidence-based home visiting using early childhood investment zone data.

Susana Martinez, Governor
Sidonie Squier, Secretary

September 26, 2012

Mr. David Abbey, Director
Legislative Finance Committee
325 Don Gaspar, Suite 101
Santa Fe, New Mexico 87501

RE: HSD Response to LFC's Draft Improving Outcomes for Pregnant Women and Infants Through Medicaid

Dear Mr. Abbey:

The Human Services Department (HSD) is pleased to submit its response to the Legislative Finance Committee's (LFC) draft program evaluation report "Improving Outcomes for Pregnant Women and Infants Through Medicaid." We appreciate the opportunity to work with the LFC's evaluation team to identify and supply the information the team needed to produce this report.

HSD is committed to improving the health of mothers and their infants through improved access to prenatal care and preventive services. Our four SALUD! managed care organizations (MCOs) have made strides over the years to improve the rate of early access to prenatal care and lower the incidence of premature and low birth weight babies. HSD's new Centennial Care program will take additional steps to significantly improve the timeliness and frequency at which pregnant women access prenatal care and to improve birth outcomes, as well as to increase the delivery of preventive services to young children. We are pleased to see that Centennial Care's goals and design align with many of the recommendations in the draft LFC report.

For example, one of the changes in Centennial Care will be to enroll all Medicaid recipients in an MCO immediately upon being made eligible for Medicaid. This does not happen in our current SALUD! program. Immediate enrollment in an MCO will enable the Centennial Care MCOs to more quickly identify members who are pregnant and provide the prenatal care they need.

HSD agrees with some of the recommendations in the draft report and is already in the process of implementing many of them. Below are HSD's responses to the recommendations.

LFC Recommendations	HSD Response
HSD should direct MCOs to collect information on health risk assessments to identify reasons for late entry into prenatal care so corrective measures can be implemented.	HSD agrees with this recommendation. Our MCOs work hard to understand reasons for late entry into prenatal care and to improve the timeliness of accessing prenatal care. HSD, through our new Centennial Care program, will institute measures to address late entry into prenatal care, including immediate MCO assignment upon being determined Medicaid eligible, and early contact with pregnant women through the individual member assessment approach. Additionally, the new ASPEN eligibility system will improve the speed at which Medicaid determinations are made.
HSD should direct MCOs to collect and, review, and report data from hospitals on complicated deliveries and compromised infants to determine if actions are needed to improve performance.	HSD agrees, in general, with this recommendation. The MCOs already track and analyze data on complicated deliveries and compromised newborns to understand how they can reduce the frequency of these undesirable outcomes. HSD will work with the MCOs on reporting complicated deliveries and compromised infants that will provide relevant data to drive health care system improvements.
HSD should work with CMS on a state plan amendment allowing longer term, evidenced-based home visiting as an approved and reimbursed service.	New Mexico currently has 53 home visiting programs operating throughout the state that serve 4,396 families annually. These programs are administered by various State agencies, non-profit organizations, churches and other community groups, all serving a similar at-risk population with little coordination or shared data. In FY11, HSD invested $2.9 million in the delivery of targeted case management to pregnant women and their infants (6,510 members), primarily through the managed care organizations via the Families First program. The Department of Health's Families, Infant, Toddler (FIT) program invested $33.8 million to provide early intervention services to 13,799 children at-risk for developmental delays. The New Mexico Children, Youth and Families Department awarded $2.2 million in home visiting contracts in FY12 to serve 645 families. Additionally, an estimated $5 million of private funds are invested annually in home visiting programs throughout the state. These programs vary in design, quality, staff training, and eligibility requirements. HSD believes that more rigorous evaluation methods of the existing home visiting landscape in New Mexico must be employed before investing additional public funds in such initiatives. Data across all of these programs is critical to informing policy decisions about how best to support and/or whether to expand home visiting services.
HSD should implement information system changes to allow data to be easily retrieved for use in analyzing data by subsets of populations and services rendered, including children zero to three years of age, number of pre-term deliveries, and reason.	HSD agrees with this recommendation and we have already been working with the MCOs and our MMIS vendor, Xerox, to expand the data collected and improve the ability to access data for analysis.

MCOs should require hospitals to report elective pre-term deliveries as a performance measure so trend data can be collected on providers and hospitals.	HSD agrees with this recommendation as way to expand current pre-natal and post-natal data reporting. HSD will collaborate with the MCO's to identify appropriate reports and set measures, goals, or targets for directed activities. That said, HSD believes collecting data and measuring trends is not enough. In early summer 2012, MAD staff was directed by HSD leadership to develop a policy to no longer cover elective deliveries prior to 39 weeks of gestational age. As part of this policy development, MAD staff reviewed the new Texas Medicaid policy related to cesarean sections, labor inductions, or deliveries following labor induction in preparation for making a similar change to our own Medicaid rules. Texas Medicaid restricts any cesarean section, labor induction, or any delivery following labor induction to one of the following additional criteria: • Gestational age of the fetus should be determined to be at least 39 weeks. • When the delivery occurs prior to 39 weeks, maternal and/or fetal conditions must dictate medical necessity for the delivery. Cesarean sections, labor inductions, or any deliveries following labor induction that occur prior to 39 weeks of gestation and are not considered medically necessary will be denied. Records will be subject to retrospective review. Payments made for a cesarean section, labor induction, or any delivery following labor induction that fail to meet these criteria (as determined by review of medical documentation), will be subject to recoupment. Recoupment may apply to all services related to the delivery, including additional physician fees and the hospital fees. MAD staff is currently in the process of revising NMAC 8.301.3 *Noncovered Services* and anticipates that this change will be incorporated into the rule.
HSD should direct the use of validated, standardized screening and assessment tools, specifically for child developmental delays and maternal depression.	HSD will take this recommendation under consideration however it is our experience that all providers will not comply with using a single, mandated screening tool. Physicians have differing ideas and opinions about the efficacy and validity of one tool versus another. HSD will direct its medical director to work with the MCOs' medical directors to identify evidence-based screening and assessment tools that can be used by MCO-contracted providers.

HSD should update agency-issued prevention guidelines to align with federal and professional organization recommendations.	HSD is committed to meeting all federal requirements and following best practices models in the administration of the Medicaid program. HSD will review prevention guidelines and collaborate with federal and professional organization representatives to formalize best practice models that may not be reflected in current federal guidelines. While HSD strives to align all prevention guidelines with federal and/or national standards, it also notes that some guidelines are not supported by professional organizations in New Mexico when the guideline is not considered relevant to the state or the population. (e.g. - the Pediatric Council of the New Mexico Medical Society does not support lead screening for children in New Mexico because, unlike other regions of the country, NM lead paint has extremely low prevalence in the state.)
HSD should use DOH epidemiological data to direct MCOs to target interventions towards geographic areas experiencing poor outcomes for pregnant women and young children.	HSD will discuss with the MCOs how best to use the DOH data to target geographic areas experiencing poor outcomes for pregnant women and young children.
HSD should direct MCOs to require pediatric practices, especially those designated as medical homes, to complete Envision New Mexico provider training.	HSD agrees with this recommendation. The Salud! MCOs already have a working relationship with Envision. HSD will consider how to best promote Envision New Mexico provider training in Centennial Care.
HSD should work with the federal CMS to amend the state plan or apply for a waiver to offer medical-based intensive home visiting services to first-time, at-risk mothers. Given the cost of this service and need for it to be well targeted, HSD should also consider allowing the MCOs to require prior approval before authorizing providers to deliver care.	Many of New Mexico's home visiting programs are "homegrown" models and have not been rigorously evaluated. In some cases, communities lack the capacity to replicate evidence-based national models as they were intended. In other cases, national models that may have worked well in one setting may not work well in New Mexico, particularly in rural communities or communities with a sizable immigrant population. The medical home visiting model referenced in the report, the Nurse Family Partnership (NFP), was implemented in a primarily white, rural community in New York State in the late 1970s. The sample size of high-risk women serving as the basis for the cost-saving estimates was a small subsample of the study, only 100 women. The benefit cost-analysis concluded that the program saved $4 for every dollar spent, resulting in a total savings of $23,439 for every high-risk family. Most of the savings were attributable to changes in the mother's behavior, related to increased employment and reduced welfare receipt; however, the main data source used to calculate the savings was based on self-reports of the participants. Yet, given the critical role that these outcomes contributed to benefit-cost analysis, they were not validated against administrative records.

	Additionally, the estimated cost to provide the NFP model in New Mexico is listed as $4,000 per family per year. The actual cost of providing the NFP model in Denver was $9,900 per family annually (in 2005 dollars). Other states have estimated the NFP model cost as $7,000 per family per year. It is also unclear whether the LFC's cost estimate includes critical components that are attributable to successful implementation of this medical model, including bachelor-level nurse supervision of nurse visitors, best-practice frequency and duration of visits, and robust initial and on-going training. The report estimates that the NFP model would require hiring 104 nurses. It is unclear whether this estimate includes bachelor-level nurse supervisors in addition to nurse home visitors. Regardless, HSD does not believe that New Mexico has such capacity in its professional healthcare workforce, particularly in rural areas of the state. Again, HSD recommends rigorous evaluation of the existing 53 home visiting programs throughout the state in order to develop measurable outcomes across programs, ensure accountability for the various funding streams and garner the best models for our culturally-diverse communities.
HSD should effectively use medical homes focused on maternal and infant care as part of its Medicaid reform. Community health centers should be at the forefront of this reform effort in many areas of the state.	HSD currently promotes a focus on maternal and infant care as part of Patient Centered Medical Homes (PCMH). The primary objective of the PCMH initiative is to provide patient care that is safe, timely, effective, equitable, patient-focused and accessible. HSD will continue to promote PCMH and all models of patient centered care in Centennial Care.

HSD recognizes the hard work of LFC's staff in producing this evaluation and in developing its recommendations. Thank you for the opportunity to review and respond to this draft report.

Sincerely,

Sidonie Squier

Sidonie Squier
Cabinet Secretary

APPENDIX A: PROJECT INFORMATION

Evaluation Objectives.

- Review costs and use of services delivered to pregnant women and very young children.
- Review Medicaid program outcomes for pregnant women and very young children, including measurers of access, quality, and cost-effectiveness.
- Assess current or potential strategies to improve outcomes and lower costs, including payment reforms, different service mix, and care coordination.

Scope and Methodology.

- Reviewed state statutes, departmental and division policies, procedures, and internal management documents.
- Conducted structured interviews with Human Services Department (HSD) staff, managed care organization staff, providers, national program coordinators, and Centers for Medicare and Medicaid Services staff.
- Reviewed financial, volume, and quality data from the department and managed care organizations.
- Reviewed published strategies for improvement from other states.

Evaluation Team.
Pamela Galbraith, Lead Program Evaluator
Valerie Crespin-Trujillo, Program Evaluator

Authority for Evaluation. LFC is authorized under the provisions of Section 2-5-3 NMSA 1978 to examine laws governing the finances and operations of departments, agencies, and institutions of New Mexico and all of its political subdivisions; the effects of laws on the proper functioning of these governmental units; and the policies and costs. LFC is also authorized to make recommendations for change to the Legislature. In furtherance of its statutory responsibility, LFC may conduct inquiries into specific transactions affecting the operating policies and cost of governmental units and their compliance with state laws.

Exit Conferences. The contents of this report were discussed with the HSD September 20, 2012.

Report Distribution. This report is intended for the information of the Office of the Governor; the Human Services Department; Office of the State Auditor; and the Legislative Finance Committee. This restriction is not intended to limit distribution of this report, which is a matter of public record.

Charles Sallee
Deputy Director for Program Evaluation

APPENDIX B: HSD 3rd QUARTER PERFORMANCE REPORT CARD, FY2012

Performance Overview: Although the Human Services Department (HSD) has many useful performance measures, there are high expectations that the department should provide quality services in a cost effective manner given the size of its budget. Third quarter performance is highlighted by continued strong results in the Child Support program area. In the $3.5 billion Medical Assistance program performance is mixed, with some good outcomes for dental visits and youth well-check visits but lower performance to-date for infant well-check visits.

Medical Assistance Program		Budget: $3,521,912.8	FTE: 175.5	FY11 Actual	FY12 Target	Q1	Q2	Q3	Q4	Rating
1	The percent of infants in Medicaid managed care who had six or more well-child visits with a primary care physician during the first fifteen months (cumulative)*			n/a, New for FY12	65%	10%	12%	29%		R
2	The percent of children and youth in Medicaid managed care who had one or more well-child visits with a primary care physician during the measurement year (cumulative)*			n/a, New for FY12	70%	36. 2%	61%	84%		G
3	The percent of children two to twenty-one years of age enrolled in Medicaid managed care who had at least on dental visit during the measurement year (cumulative)*			73%	70%	26%	38%	60%		Y
4	Percent of eligible adults, below one hundred percent federal poverty level, who get health care coverage through medical assistance programs*			52%	35%	52%	56%	56%		G
5	Number of individuals that transition from nursing facilities placement to community based services (cumulative)*			154	150	n/a	n/a	154		G
Program Rating				Y						Y

Comments: The lag time for processing Medicaid claims make it difficult to draw conclusions based on initial data. HSD deserves credit for measuring their success at providing preventive care to children; however progress to date in FY12 for percent of infants receiving at least six well child visits during the first 15 months is of concern (HSD is confident that the target will be met). Performance in youth receiving an annual check-up is much better at this point. In FY13, HSD is moving away from measures that estimate the percentage of eligible children and adults participating in Medicaid due to data measurement difficulties. In FY13, additional measures will be added that attempt to measure quality of care, such as number of emergency room visits for Medicaid members and percent of hospital readmissions. Given that Medicaid represents approximately 20 percent of the state budget, the department should consider use of quality of care related performance data collected by managed care organizations in its performance reports.

Medicaid Behavioral Health Program		Budget: $284,996,500	FTE: 0	FY11 Actual	FY12 Target	Q1	Q2	Q3	Q4	Rating
6	Percent of readmissions to the same level of care or higher for children or youth discharged from residential treatment centers and inpatient care*			10.7%	8%	10.7%	16.4%	3.4%		Y
Program Rating				Y						Y

Comments: Medicaid is the predominant payer of behavioral health services, but the department reports only one Medicaid behavioral health measure. The Behavioral Health Collaborative submits a separate quarterly report, tracking the behavioral health programs across state government. In FY10, the readmission rate for youth discarded from residential treatment centers and inpatient care was less than 10 percent. For the first two quarter of FY12 the trend was heading in the wrong direction but performance improved in the third quarter. HSD notes that overall discharge numbers are down (as are readmissions) as they move towards more community-based care versus residential care.

Income Support Division		Budget: $764,375,700	FTE: 1,133	FY11 Actual	FY12 Target	Q1	Q2	Q3	Q4	Rating
7	Percent of TANF participants who retain a job for six or more months *			48.0%	55%	n/a	n/a	n/a		Y
8	Percent of TANF clients who obtain a job during the state fiscal year (cumulative)*			27%	50%	n/a	33%	n/a		Y
9	Percent of TANF two-parent recipients meeting federally required work requirements*[1] (cumulative)			50.9%	60%	42.8%	47.3%	50.1%		R
10	Percent of TANF recipients (all families) meeting federally required work requirements*			42.9%	50%	42.1%	42.7	42.3%		R
11	Percent of children eligible for Supplemental Nutritional Assistance Program participating in the program at 130% of poverty level*			85.7%	82%	82%	82%	82.2%		G

Program Rating				Y					Y
Comments: New Mexico has struggled to meet work performance targets for TANF clients, although the HSD notes that New Mexico typically exceeds the national average of work participation rates which average less than 30 percent. HSD recently reported 2nd quarter employment data for TANF clients, but due to lag in receiving unemployment insurance data does not have 3rd quarter information to report. The 33 percent of TANF clients reported as obtaining a job through the second quarter compares favorably to data from NM Works contractor SL Start, which shows a 37 percent placement rate for TANF clients. The program is meeting all of its performance measures in the Supplemental Nutrition Assistance Program (SNAP, formerly Food Stamps), and there is continued growth in SNAP enrollment due mostly to the economic recession.									
[1]Data reported by federal fiscal years									
Child Support Services		Budget: $33,526,100	FTE: 400	FY11 Actual	FY12 Target	Q1	Q2	Q3	Q4	Rating
12	Percent of children with paternity acknowledged or adjudicated			88%	75%	94.8%	95.7%	96.9%		G
13	Total child support enforcement collections, in millions* (cumulative)			$123.5	$111.0	$29.3	$57.7	$94.1		G
14	Percent of child support owed that is collected*			57.4%	60%	56%	56%	57%		Y
15	Percent of cases with support orders*			72.5%	70%	75%	75%	77%		G
Program Rating				Y						G
Comments: The percent of currently owed child support that is collected is an area of concern, as performance has leveled off. Other targets, such as acknowledged paternity, number of cases with support orders and total collections, are on track. The overall dollar amount collected has continued to increase and is on pace to set a record high.										
Program Support		Budget: $40,811,100	FTE: 252.5	FY11 Actual	FY12 Target	Q1	Q2	Q3	Q4	Rating
16	Percent of federal grant reimbursements completed that minimize the use of state cash reserves in accordance with established cash management plans. *			100%	100%	82%	80%	80%		Y
17	Percent of intentional violations in the supplemental nutrition assistance program investigated by the office of inspector general that are completed and referred for an administrative disqualification hearing within ninety days for the date of assignment. *			97%	70%	90%	79%	100%		G
Program Rating				Y						Y
Comments: Program support typically does well on its targeted performance measures. Overall performance, particularly in Medicaid cash management, bears monitoring.										

Suggested Performance Measure Improvement

It is desirable for the HSD to include more measures that demonstrate effectiveness including meaningful outcome measures, national benchmark measures comparing New Mexico to other states, and more efficiency measures denoting average cost per client compared to other states.

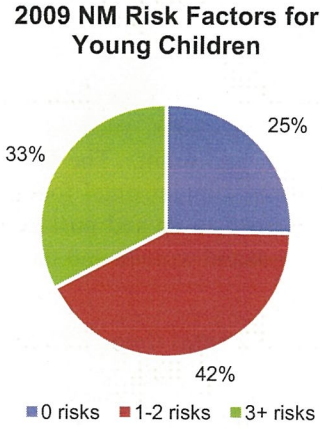
HSD seems to be making progress in resolving data issues with reporting employment for TANF clients—a core function of the program. Some progress was made the last session in adding outcome measures in the Medicaid in the area of ER visits and hospital readmissions; LFC staff will continue to push HSD to start utilizing outcome measures contained in its contracts with managed care organizations that measure quality of care in areas such as diabetes and asthma. As noted in the report card for Behavioral Health (and applicable to Medicaid Behavioral Health as well) the department could use more quarterly measures in this area and measures that capture longer term outcomes for behavioral health clients.

* Denotes House Bill 2 measure

APPENDIX C: STATUS OF NEW MEXICO'S MOTHERS AND CHILDREN

Background. "A vital and productive society with a prosperous and sustainable future is built on a foundation of healthy child development. Health in the earliest years, actually beginning with the future mother's health before she becomes pregnant, lays the groundwork for a lifetime of well-being" is the lead-in statement for Harvard University's publication addressing issues in the development of a healthy population. Research has demonstrated that early child health and social development interventions, prenatally and for the first five years of a child's life, promotes brain development and maturation and results in positive life-long health and social outcomes.

The New Mexico Early Childhood Profile, compiled by the National Center for Children in Poverty, identifies policy, economic, and social conditions which impact the health of children. Young children are defined as those less than six years of age. In New Mexico that represents approximately177 thousand children. The profile identifies risk factors which can compromise the health and social development of children. The greater number of risk factors, the higher the probability that health and social development will be hampered. Risk factors include: single parent, living in poverty, linguistically isolated, parents with less than a high school education, and parents with no paid employment. The Center identifies 25 percent of young children in New Mexico are exposed to three or more risks which could influence their social development process.

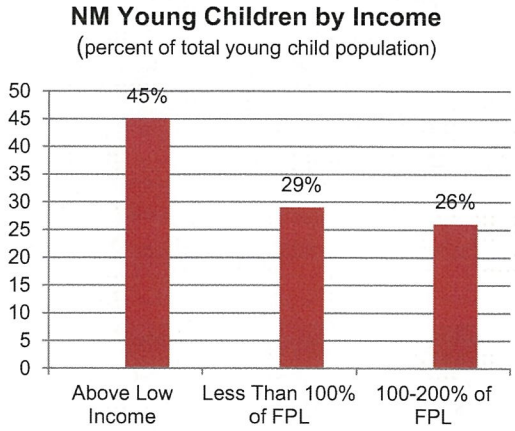


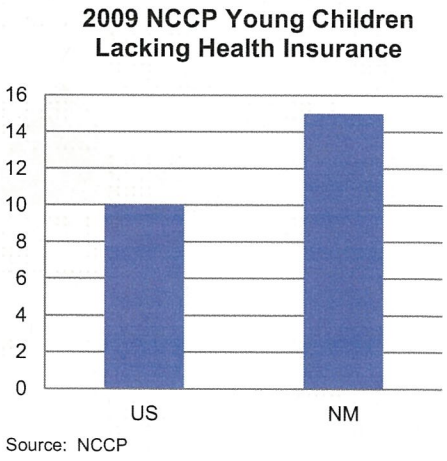
This report card compiled relevant performance measures which gauge New Mexico's progress, comparing data with that of other states or over different time frames in New Mexico reporting.

Family Economic Self Sufficiency

Income. Thirteen percent of New Mexico's children live in extreme poverty, less than 50 percent of federal poverty level. For 2012, the Federal Register identifies a family of four with a gross yearly income less than $12 thousand as living in extreme poverty. In 2009, thirty-one percent of children in New Mexico were living with families where no parent had full-time, year-round employment.

Health Insurance. Families without health insurance are less likely to participate in preventive screenings and assessments, including adherence to recommended schedules for prenatal and well-child visits.



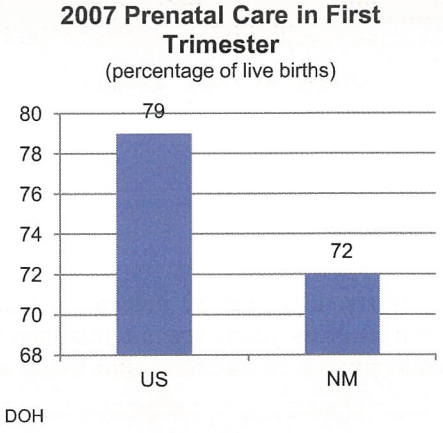


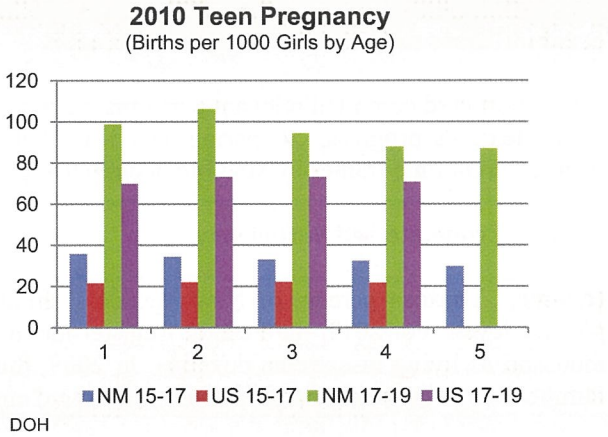
Maternal Health

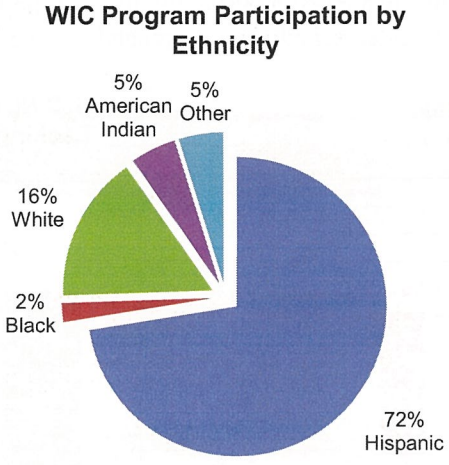
Prenatal Care. Certain vulnerable populations—including young women, poor women, women with lower education levels, and women in certain racial and ethnic groups, are less likely to receive adequate prenatal care. The US Department of Health and Human Services, Healthy People 2010, have established a compliance goal for first trimester prenatal care at 90 percent of all pregnant women.

Teen Pregnancy. Pregnancy and birth are significant contributors to high school dropout rates among girls. Only 50 percent of teen mothers receive a high school diploma by 22 years of age compared to approximately 90 percent of women who had not given birth during adolescence. The children of teenage mothers are more likely to have lower school achievement and drop out of high school, have more health problems, be incarcerated at some time during adolescence, give birth as a teenager, and face unemployment as a young adult.

Nutrition. Poor nutrition during pregnancy can result in infant mortality, birth defects, pre-term births, and maternal complications, such as pre-eclampsia. Pre-eclampsia affect the placenta and can harm the mother's kidneys, liver, and brain. The United States Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides supplemental foods, nutritional education, and health and social services referrals for low-income pregnant, breastfeeding and post-delivery women, infants, and children. In FY11, the New Mexico WIC Program served 62 thousand women and families.





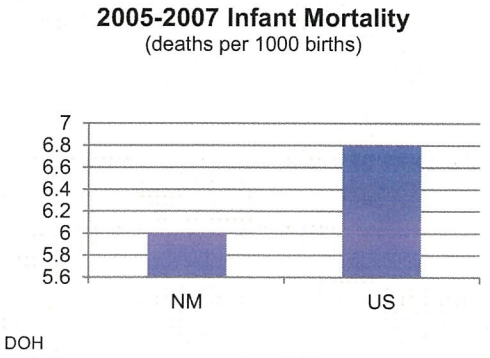


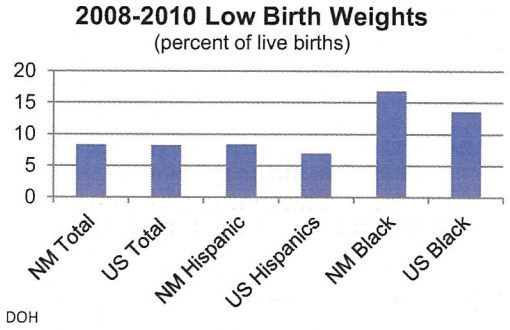
Source: NM WIC Website

Child Health

Infant Mortality. From 2005-2007, infant mortality in New Mexico ranked 14th in the nation, with 1st representing the best state for children. Although a rate was not reported in 2010, the number of deaths in New Mexico was 155. The leading causes of those deaths were prenatal conditions, congenital malformations and unintentional injuries.

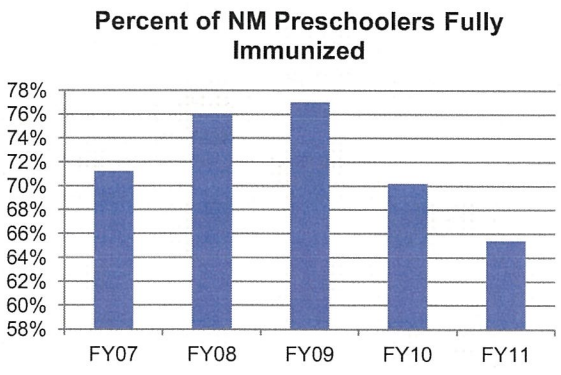
Low Birth-weight. Low birth-weight is a major determinant of mortality, morbidity, and disability in infancy and can have long-term consequences on health outcomes in adult life.



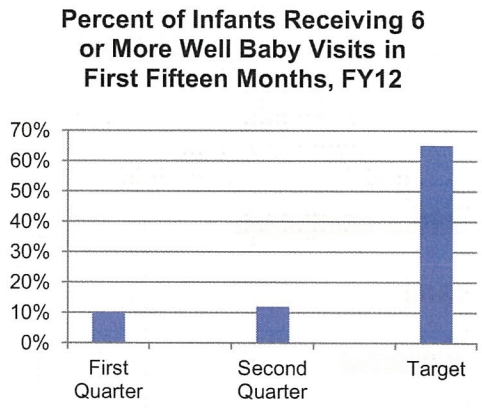


Immunizations. Immunizations provide one of the most cost-effective interventions by which to contain the spread of infectious diseases and prevention of serious illness and deaths in children. A portion of the recent drop in the percent of children being immunized can be attributed to the number of parents requesting exemptions.

Well-Baby Visits. The New Mexico Medicaid program recommends infants receive well-baby visits at ages 1,2,4,6,9 and 12 months and young children receive visits at ages 15, 18, 24, and 36 months. The well- baby visit measure is new in FY12. Timing of visits and the lag time in Medicaid claim processing requires a year of monitoring to produce a useful measure.



Source: DOH



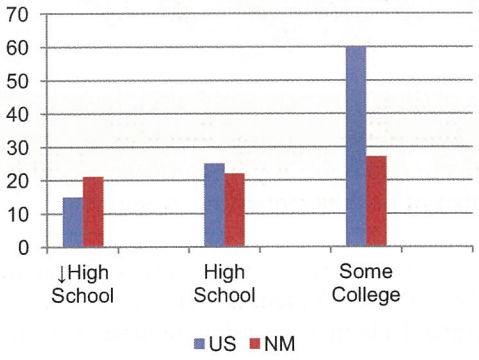
Source: HSD

School Readiness

Education of Mother. Teen mothers are disproportionally represented in the group with less than a high school education. Research cited by the Foundation for Child Development links higher parental educational attainment to stronger educational outcomes for children and can provide greater financial resources to the family.

Pre-K and Child Care. New Mexico Pre-K, promoting school readiness, is a voluntary program funded by the state of New Mexico. The Public Education and the Children, Youth, and Families Departments both administer Pre-K programs. Enrollment is not based upon income eligibility determination. Pre-K programs are ranked using the Stars Quality Rating System. The level of program quality is indicated by one, two, three, four, or five stars with five being the highest ranking.

2009 Educational Level of Mothers with Young Children
(percent of total mothers)



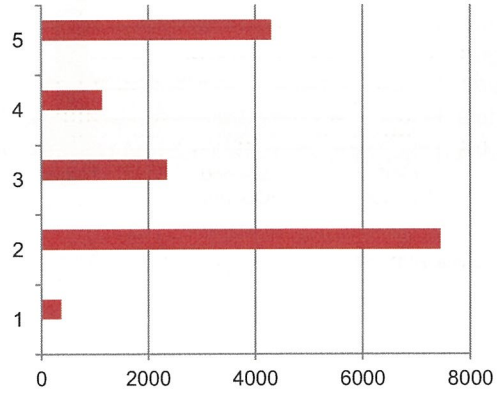
Source: National Center for Children in Poverty

Percent of Pre-K Students Showing Measurable Progress on the Preschool Readiness Kindergarten Tool, FY11

	CYFD	PED
Physical Development, Health and Well-Being	94.8%	96. 0%
Domains	90.1%	92.3%
Numeracy	90.3%	92.2%
Aesthetic Creativity	86.5%	89.1%
Scientific Conceptual Understandings	84.8%	86.7%
Self, Family and Community	89.4%	90.3%
Approaches to Learning	91.0%	93.4%

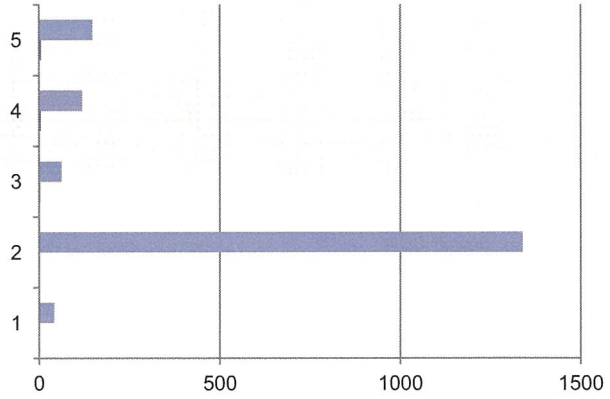
Source: UNM

Number of Children in Licensed Daycare Centers
(by Star level in February 2012)



Source: CYFD

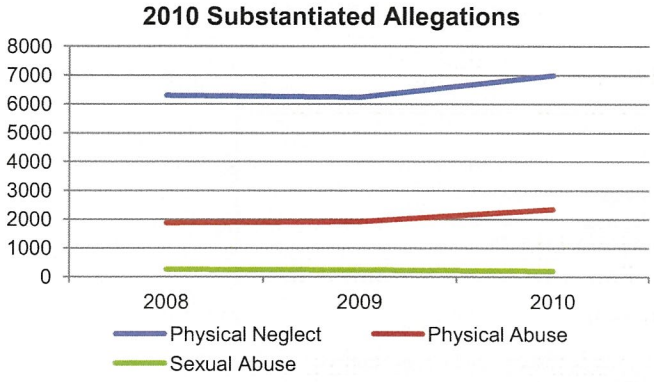
Number of Children in Licensed Homes
(by Star Level in February 2012)



Source: CYFD

Child Maltreatment

Child Abuse and Neglect. In 2010, over 6 thousand children were the victims of abuse of neglect in New Mexico. As a result of the maltreatment, nineteen of those children died. Studies have shown in addition to any physical health issues, child victims may suffer life-long psychological consequences including: post-traumatic stress disorders, depression, anxiety, eating disorders, and suicide attempts. According to the National Institute of Justices, abused or neglected children are eleven times more likely to be arrested for criminal behavior as juveniles. As of 2010, seven percent of children in out-of-home placements experienced a reoccurrence of maltreatment within six months of an abuse incident.



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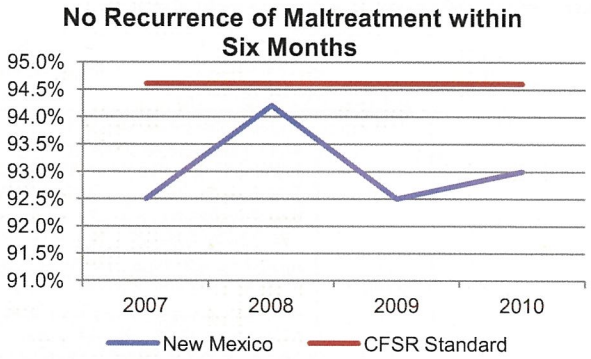


Source: PSD Fact Book

Domestic Violence. Recent research indicates that children who witness domestic violence show more anxiety, low self esteem, depression, anger and temperament problems than children who do not witness violence in the home. The trauma they experience can show up in emotional, behavioral, social and physical disturbances that effect their development and can continue into adulthood. Witnesses of domestic violence have a greater propensity to become abusers.

2008 Domestic Violence Statistics

↓

27,795 Incidents of Domestic Violence

↓

4,302 Children Witnessed the Assaults

↓

1,119 Child Witnesses Were Also Assaulted

Delinquency. Based upon 2010 data reported by New Mexico law enforcement agencies to the Federal Bureau of Investigation, 110,709 arrests were made in the state. Of those, 11 percent were arrests of individuals 18 years or younger. The following table shows arrest by selected types of crime for the younger population.

2010 NM Arrests for Individuals 18 Years or Younger

Violent Crimes	484
Aggravated Assaults	404
Other Assaults	1722
Larceny/Thefts	2502
Drug Abuse Violations	1628
Liquor Laws	857
Vandalism	398

Source: FBI

APPENDIX D: PRENATAL CARE AND FETAL DEVELOPMENT

The need for early prenatal care is evidenced by the rapid pace of fetal development. At week 12 of pregnancy, the basic development of body structures is nearing an end as most of the baby's systems are fully formed. System maturation continues for the next 28 weeks and organs begin to work. The digestive muscles begin to flex, the pituitary gland at the base of the brain is producing hormones, and the bone marrow is producing white cells to help the fetus fight infections. At 18 weeks rapid messaging is occurring between nerve cells to create more complex connections. Brain cells are specializing into those which will serve to provide the infant with senses of touch, taste, smell, sight, and hearing. Between 14 weeks and 22 weeks of pregnancy, maternal blood tests can indicate risks for chromosomal or congenital anomalies. At 39 weeks, the infant's brain is still rapidly developing, a process which will continue for the next three years.

Fetal Development

Week 6	Nose, mouth and ears are taking shape. Eyes and nostrils are beginning to form. Arms and legs are protruding buds. The heart is beating 100-160 times a minute. Blood is beginning to course through the body. The pituitary gland, brain, muscles, and bones are forming. Intestines and lungs are beginning to form.
Week 12	Reflexes are developing. Fingers can open and close, toes are curling. Kidneys begin to excrete urine. Nerve cells are rapidly multiplying and brain synapses are furiously forming.
Week 16	Body size will double over next few weeks. Toenails are growing. The head is more erect. The heart is now pumping 25 quarts of blood each day.
Week 20	More swallowing is occurring. Meconium, the digestive by-product, is being produced. The fetus measures around 6 inches.
Week 24	The brain is going through another rapid growth spurt and will continue to develop through age 3 years. The lungs are developing the "branches" of the respiratory tree. Surfactant, the substance that will help inflate the lungs at birth, is being produced.

Source: Baby Center

A significant number of pregnant women remain in jeopardy, lacking early healthcare interventions. Although information previously stated in the report pointed out inadequacy in the delivery of prenatal care, early entry to prenatal care can be caused by many barriers.

The Institute of Medicine conducted an extensive literature search to classify the barriers into three categories: socioeconomic, system-related, and attitudinal.

Barriers to Use of Prenatal Care

Socioeconomic	System-related	Attitudinal
Poverty	Inadequate Medicaid benefits	Unplanned pregnancy
Minority status	Complicated Medicaid enrollment process	Signs of pregnancy unknown or recognized
Age less than 18 years	Poorly advertised Medicaid availability	Prenatal care not valued or understood
Non-English speaking	Inadequate transportation	Fear of parental discovery
Unmarried	Weak links between pregnancy testing and prenatal services	Fear of deportation
Less than a high school education	Poor communication between providers and clients	Fear that health habits would be discovered
	Physician shortages	Inadequate social supports

Source: IOM

A review of the socioeconomic factors impacting prenatal care demonstrates the risk for New Mexico's women:

- 43 percent of New Mexico's children live in poverty.
- Over 370,000 children are identified as a minority.
- NM Is 49th in the nation for number of teen births.
- NM mothers are below the national averages for either a high school or college education.

The 2008 New Mexico Department of Health Pregnancy Risk Assessment and Monitoring System Survey (PRAMS) found that over 75 percent of women queried stated they received prenatal care as early as they wanted. The survey does not question the woman's knowledge of the importance of prenatal care. Of those responding to the 2008 survey, only 24 percent were Medicaid enrollees prior to the pregnancy. Survey results did identify situations which appear to contribute to not seeking prenatal care: lack of Medicaid or other insurance, lack of transportation, were not participants in WIC, had less than a high school education, were unmarried, were of Native American ethnicity, or had an annual income less than $23,400.

APPENDIX E: NEW MEXICO PRE-TERM BIRTHS BY COUNTY, FY11

Pre-Term Births in New Mexico by County, 2011

Mother's County of Residence	Number All Births that Were Pre-Term	Number of Live Births	Percentage of All Births that Were Pre-Term
Bernalillo	1,046	8,385	12.5
Catron	3	22	13.6
Chaves	108	929	11.6
Cibola	55	395	13.9
Colfax	**29**	**143**	**20.3**
Curry	108	940	11.5
De Baca	**5**	**24**	**20.8**
Dona Ana	333	3,240	10.3
Eddy	71	768	9.2
Grant	26	292	8.9
Guadalupe	5	38	13.2
Harding	0	7	0
Hidalgo	12	76	15.8
Lea	163	1,063	15.3
Lincoln	24	198	12.1
Los Alamos	12	153	7.8
Luna	45	357	12.6
McKinley	174	1,305	13.3
Mora	4	44	9.1
Otero	117	934	12.5
Quay	10	111	9.0
Rio Arriba	86	576	14.9
Roosevelt	37	282	13.1
Sandoval	206	1,554	13.3
San Juan	246	1,910	12.9
San Miguel	30	317	9.5
Santa Fe	149	1,394	10.7
Sierra	**16**	**87**	**18.4**
Socorro	32	238	13.4
Taos	47	328	14.3
Torrance	20	173	11.6
Union	2	40	5.0
Valencia	124	928	13.4
Total	3,345	27,251	12.3

Source: DOH

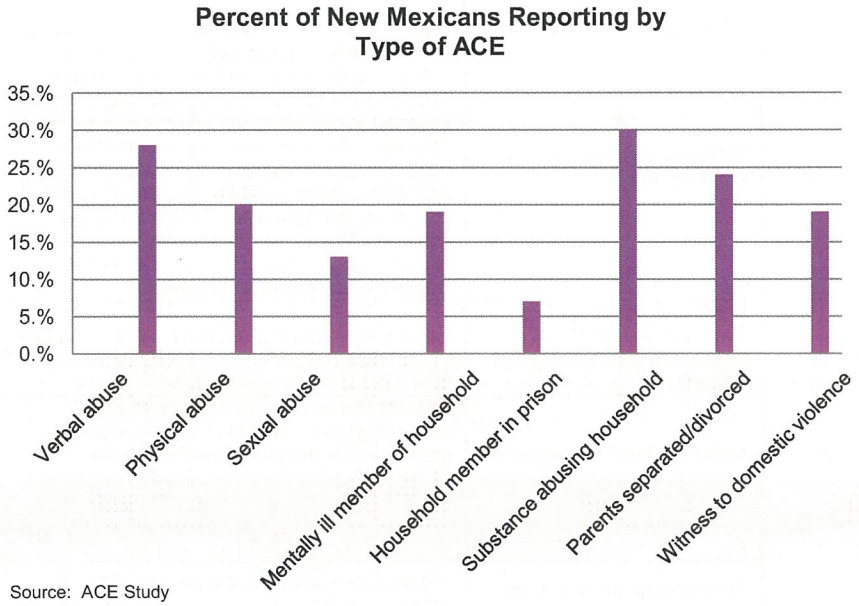
APPENDIX F: CHILDREN'S CABINET CHALLENGES AND GOALS FOR YOUNG CHILDREN, 2012

Challenge	Goal
Reducing the state's infant mortality rate	Home Visiting programs provide support and critical information to families and caregivers. Teachers in high quality programs share important information regarding the health & well-being of children. The DOH will promote better birth outcomes and healthier mothers and children by providing supplemental nutritious food, nutrition education, and referrals to health and social services. We will also promote increased levels of prenatal care and participation in Early Periodic Screening Diagnosis & Treatment.
Confronting childhood obesity to give all New Mexico children a chance at a healthy life	Healthy Kids New Mexico is a project of the DOH that creates programs to give children the tools they need to live a healthy lifestyle.
Improving reading readiness so that our kids have a strong foundation for learning	New Mexico is committed to significantly increasing the number of students reading on grade level by the end of the third grade. Childcare teachers will be trained to use New Mexico Early Learning Guidelines, which plans reading activities for children from birth through Kindergarten.
Encouraging out-of-system adoption to provide caring families for kids in need	We seek to ensure that a minimum of 26. 8 percent of foster children in New Mexico who are ready for adoption find their "Forever Family" within 24 months of entry into the foster care system.

Source: NM Children's Cabinet

APPENDIX G: ADVERSE CHILDHOOD EXPERIENCES

The most reported ACE from the New Mexican population was living with substance abusing household members.



Source: ACE Study

APPENDIX H: PROFILES OF NEW MEXICO'S MCOs

BLUE CROSS AND BLUE SHIELD OF NEW MEXICO

Total Cost of Services, FY08-FY11

Children zero to two months: $20.5 million
Children two months to three years: $22.6 million
Pregnant Women: $17.2 million

National Committee for Quality Assurance Ratings

Access and Service	Qualified Providers	Staying Healthy	Getting Better	Living With Illness	Overall Accreditation Status
Excellent	Excellent	Provisional	Commendable	Accredited	Commendable

NCQA Health Insurance Plan Rankings 2011-2012: Medicaid

Ranked #95
Overall Score: 62.5
NCQA Accreditation: No

Special Beginnings: Maternity Program. Special Beginnings is designed to help clients better understand and manage their pregnancy. Through the program, members are entitled to:

- Two pregnancy risk assessments;
- Information and materials about nutrition and healthy life choices before and after the baby is born, information on how the unborn baby is growing, newborn care, and well-child information;
- Personal phone calls from a specially trained nurse to make sure the mother and baby are doing well. The nurse will continue to call for six weeks after the baby is born;
- 24-hour, toll-free access to a telephone hotline staffed by experienced registered nurses and maternity nurses. The hotline includes access to an audio library with health information; and
- Access to a website with a pregnancy calendar, articles, and videos about pregnancy, childbirth, and newborn care.

LOVELACE HEALTH PLAN

Total Cost of Service, FY08-FY11

Children zero to two months: $38.4 million
Children two months to three years: $183.4 million
Pregnant Women: $89 million

National Committee for Quality Assurance Ratings

Access and Service	Qualified Providers	Staying Healthy	Getting Better	Living With Illness	Overall Accreditation Status
Excellent	Commendable	Provisional	Accredited	Accredited	Commendable

NCQA Health Insurance Plan Rankings 2011-2012: Medicaid

Ranked #57
Overall Score: 80.0
NCQA Accreditation: Yes

Baby Love: Pregnancy Program. Baby Love is a resource for women with Lovelace insurance. It is included in the benefits at no extra charge. The program provides:

- A pregnancy survey to help Lovelace tailor a program for the mother;
- Help finding a doctor or midwife;
- Nurses to help the client understand how to take care of herself and the baby;
- A schedule of the recommended prenatal check-ups;
- Pregnancy and newborn information mailed to the home;
- Case managers to help with special needs; and
- Access to nurses by phone to answer questions 24/7 during the pregnancy and up to 6 weeks after the baby is born.

MOLINA HEALTHCARE

Total Cost of Services, FY08-FY11

Children zero to two months: $45.6 million
Children two months to three years: $94.8 million
Pregnant Women: $79.4 million

National Committee for Quality Assurance (NCQA) Ratings

Access and Service	Qualified Providers	Staying Healthy	Getting Better	Living With Illness	Overall Accreditation Status
Excellent	Excellent	Accredited	Accredited	Commendable	Excellent

NCQA Health Insurance Plan Rankings 2011-2012: Medicaid

Ranked #50
Overall Score: 81.1
NCQA Accreditation: Yes

Motherhood Matters: Pregnancy Program. Motherhood Matters is a program for pregnant women. This program helps women get the education and services they need for a healthy pregnancy. Members will be mailed a workbook and other resources offered in six languages. Women can talk with a care manager about any questions they may have during the pregnancy. Also, expectant mothers will learn ways to stay healthy during and after the pregnancy. Other benefits include: health education materials and community referrals to resources available to pregnant women.

PRESBYTERIAN HEALTHCARE SERVICES

Total Cost of Services, FY08-FY11

Children zero to two months: $131.4 million
Children two months to three years: $220.8 million
Pregnant Women: $146.7 million

National Committee for Quality Assurance Ratings

Access and Service	Qualified Providers	Staying Healthy	Getting Better	Living With Illness	Overall Accreditation Status
Excellent	Excellent	Denied	Accredited	Provisional	Commendable

NCQA Health Insurance Plan Rankings 2011-2012: Medicaid

Ranked #62
Overall Score: 79.4
NCQA Accreditation: Yes

PREScious Beginnings: Prenatal Program. PREScious Beginnings Prenatal Program is a perinatal case management program committed to healthy birthing outcomes. All case managers and home care nurses are highly skilled RNs. The program goals are:

- To educate Presbyterian clients,
- Increase gestational age and birth-weight of newborn infants, and
- Decrease the number of admits to NICU.

The PREScious Beginnings program offers referrals to prenatal education classes and doula services; referrals to community services for identified client needs, and Presumptive Eligibility (PE) and Medicaid On Site Application Assistance (MOSAA). RNs assess for medical, environmental, psychological, socio-economic, and life style risk factors that may impact pregnancies based upon the guidelines established by the American College of Obstetricians and Gynecologists.

APPENDIX I: RESULTS FIRST MODEL, NURSE-FAMILY PARTNERSHIP

Background discussion of Results First. This report summarizes the findings of a cost-benefit analysis of Nurse-Family Partnership (NFP) based on the Results First initiative of the Pew Center on the States and the John D. and Catherine T. MacArthur Foundation with additional support from the Annie E. Casey Foundation. The Results First model was developed by the Washington State Institute for Public Policy and enables states to identify opportunities to invest their limited funds in more effective ways that can generate both better outcomes for citizens and substantial long-term savings. New Mexico is one of twelve states that are customizing this model and using its results to inform policy and budget decisions.

Alternative analysis. The analysis presented in the body of the report for NFP excludes MCO costs to implement programs. An additional analysis was run in the New Mexico Results First Model to account for administration and taxes through MCOs which raised the program cost by 15 percent. The results were a reduced benefit to cost ratio, however the ratio was still positive and compares closely with the original run represented in Table 7.

Investing in a NFP model for just 2,600 of the highest risk families in Medicaid would cost the general fund an estimated $3.1 million and $7.6 million in federal Medicaid funds. Therefore, the state general fund would cover approximately 30 percent of the cost per family investment in NFP. The average cost per family per year would be about $4,100 and would require hiring about 104 nurses. There are estimated benefits to taxpayers accrued in lower Medicaid costs, and in other government sectors, including child protective services, public schools, and corrections. The current New Mexico Results First cost-benefit model has some limitations but was built to err on the side of providing conservative estimates. Note that the model assumes that best practices are followed in program implementation.

New Mexico Results First Model Cost Benefit Analysis for Nurse-Family Partnership
(per participant)

Benefits to Participants	Benefits to Taxpayers	Other Benefits	Total Benefits	Costs	Benefits-Costs	Benefits/Costs
$11,586	$8,545	$13,402	$33,533	($7,328)	$26,205	$4.58

Source: New Mexico Results First Model

Model limitations. Several factors need to be considered when interpreting these findings. Our analysis is based on an extensive and comprehensive review of research on program outcomes as well as an economic analysis of the benefits and costs of investments in evidence-based programs. The results indicate that New Mexico can obtain favorable outcomes if it can substantially and successfully increase its use of several evidence-based programs.

The predicted costs, benefits, and return on investment ratios for each program are calculated as accurately as possible but are, like all projections, subject to some level of uncertainty. Accordingly, it is more important to focus on the relative ranking of programs than small differences between them; some programs are predicted to produce large net benefits and represent 'best buys' for the state while others are predicted to generate small or even negative net benefits and represent neutral or poor investment opportunities.

Also, it is important to recognize that program integrity – how closely program delivery matches its design – is critically important to achieving the predicted outcomes. The model assesses evidence-based programs that are designed to follow specific treatment models, and failure to operate these programs as prescribed can dramatically reduce their outcomes. For example, Washington State's experience with Functional Family Therapy for juvenile offenders found that when the program was not implemented competently it did not reduce crime at all. On the other hand, when it was delivered as designed, the program produced very positive returns on investment. Thus, safeguarding the state's investment in evidence-based programs requires ongoing efforts to assess program delivery

and, when necessary, taking corrective actions to hold managers accountable for the program's outcomes (e.g. reducing recidivism in clients served). We constructed our estimates cautiously to reflect the difficulty that is often encountered when implementing such programs at scale.

Finally, the current version of the New Mexico Results First model does not currently contain some cost savings (e.g. juvenile justice) and uses some proxy data. Proxy data was selected to provide conservative estimates of benefits. As the model is updated with potential cost savings from additional service areas results could change slightly and will likely provide a higher rate of return on investment.

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October 15, 2012

MEMORANDUM

TO: David Abbey, Director, LFC

FROM: Jon Courtney, Ph.D., Program Evaluator III, LFC

SUBJECT: Early Childhood Evidence-Based Programming

Background. On September 27, 2012 the LFC presented a program evaluation on the Human Services Department (HSD) regarding improving outcomes for pregnant women and infants though Medicaid. In this evaluation the LFC recommended that HSD should work with the federal CMS to amend the state plan or apply for a waiver to offer medical-based intensive home visiting services to first-time, at-risk mothers. In her response HSD Secretary Sidonie Squier made the claim that national models may not work well in New Mexico, particularly in rural or diverse populations and that Nurse-Family Partnership (NFP) has an inadequate research base citing a single study done in New York from the 1970's. The Secretary presented additional criticisms of NFP including overestimates of cost and lack of nurses in the state to support implantation.

Purpose. The purpose of this memorandum is to objectively present the state of evidence-based programs pertaining to early childhood education, to provide information on the use of cost-benefit analysis in policy decisions and to address the validity of claims made by Secretary Squier regarding the research base, applicability to rural and diverse populations, and cost estimates of one evidence-based model, NFP.

Evidence-based programs. Evidence-based programs are approaches that have proven to be successful though rigorous evaluation. Currently there is a shift among state and federal governments to base funding on delivery of evidence-based programming. For example the federal Affordable Care Act created the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) is an evidence-based policy initiative which requires at least 75 percent of federal

grant funds to be used for evidence-based home visiting models[1]. At the state level, the Washington State Institute for Public Policy (WSIPP) has utilized a cost-benefit model to inform decisions of policy makers so that they can invest in evidence-based programs that deliver the best results for the lowest cost. The Pew Center on the States has attributed a number of positive outcomes to the use of this approach including a savings of $1.3 billion per biennium and lower arrest and crime rates in the state of Washington[2]. The majority of early childhood evidence-based programming research has focused on home visiting models, although models in education (e.g. early head start) and prevention (Triple P Positive Parenting Program) also exist.

Current programming in New Mexico. Currently, federal funding is being utilized in New Mexico to implement two evidence-based home visiting models. NFP is being implemented in Albuquerque by the UNM/Center for Development and Disability and Parents as Teachers is being implemented by the Gallup/McKinley County School district. Additionally, a home visitation program called First Born is being implemented in 10 counties and has been identified as meeting federal promising practice guidelines by a researcher with the RAND Corporation[3].

The current lack of evidence-based home visiting practices in New Mexico is cited by the HSD which counts 53 distinct home visiting programs across the state, the majority of which are not evidence-based. An LFC memorandum from June 15, 2012 points to a need for additional services. Poverty, along with per capita expenditures for public welfare and school completion rates have been established as predictors of teen birth rates[4]. Nationally, New Mexico is ranked as the poorest state[5], has the highest rate of teen births[6], is 45th in high school graduation rate[7], and had a 12.1 percent increase in victims of abuse or neglect in 2010[8]. There are 71 babies born pre-term each week, 49 babies are low birth-weight each week, and four children will die before their first birthday.

To address these outcomes the recommendation of the HSD is to rigorously evaluate the existing 53 home visiting programs to determine effectiveness. Whereas using internal program evaluation to set agency priorities is a best practice that should be implemented by all agencies, the proven effectiveness and cost savings of evidence-based programs, along with the high level of unmet need in New Mexico, warrants immediate investment. Also fidelity is important in program delivery so the two approaches should not be considered to be mutually exclusive of one another. Program implementation should include an evaluation component as programs delivered without fidelity are unlikely to deliver desirable outcomes.

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[1] The MIECHV initiative identified nine evidence-based programs that meet HHS criteria (Child First, Early Head Start-Home Visiting, Early Intervention Program for Adolescent Mothers (EIP), Family Check-Up, Healthy Families America (HFP), Healthy Steps, Home Instruction for Parents of Preschool Youngsters (HIPPY), Nurse Family Partnership (NFP), and Parents as Teachers)[1]. Federal law also provides guidelines for identification of programs as promising practices, which are programs that are currently undergoing evaluation.

[2] Pew Center on the States. http://www.pewstates.org/uploadedFiles/PCS_Assets/2012/ResultsFirst_Washington_casestudy.pdf

[3] There are also examples of other early childhood evidence-based programs being implemented in New Mexico. Early Head Start is implemented in many locations across the state, and the Triple P Positive Parenting Program is being implemented by CYFD providers in Dona Ana and Valencia counties.

[4] Zimmerman, S. L., (1987). *State Level Public Policy Choices as Predictors of State Teen Birthrates*. Family Relations, 37, (p.315-321)

[5] United States Census Bureau. *Income, Poverty, and Health Insurance Coverage in the United States: 2011.* http://www.census.gov/prod/2012pubs/p60-243.pdf

[6] Annie E. Casey Foundation

[7] National Center for Education Statistics

[8] Child Welfare League of America

New Mexico Results First cost-benefit analysis of evidence-based programs. To conduct systematic reviews of evidence-based programs, WSIPP has conducted meta-analysis on numerous evidence-based programs that target early childhood. The meta-analysis is based on 10 peer reviewed articles and a multivariate regression analysis of 106 effect sizes from evaluations of home visiting programs within child welfare or at-risk populations.

Selected Program Effects from Washington State Institute for Public Policy (WSIPP) Meta-Analysis[9]

Outcome Measured	Unadjusted Effect Sizes	Significance Level
Crime	-0.7	p<.01
Test scores	0.13	p<.04
Child abuse and neglect	-0.88	p<.01
Disruptive behavior disorder symptoms	-0.22	p<.01

Source: WSIPP

The LFC NM Results First model was used to conduct a cost-benefit analysis on NFP. The analysis showed a $5 return for every $1 invested. Only high-quality studies with credible evaluation designs are included in this analysis. In most cases, these studies use randomized trials where the oldest of these studies is from 1997 and most have occurred within the last ten years. Studies include diverse populations along with urban and rural settings. The Results First analysis assumes program fidelity.

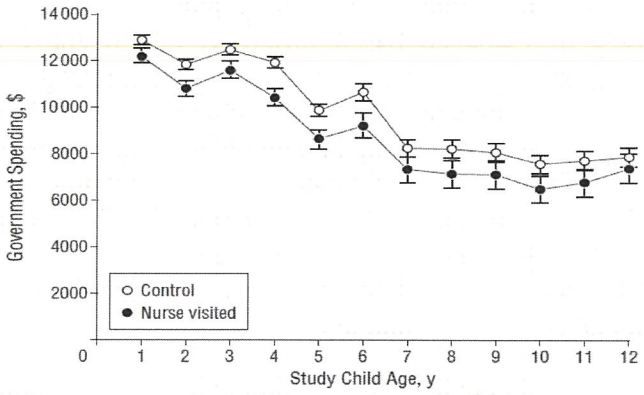

Figure. Total discounted government spending in 2006 dollars after the birth of a first child for nurse visited and control group families in Memphis, TN. Adapted from Olds et al (2010).[10]

There is converging evidence from other cost-benefit analyses that evidence-based programs such as NFP lead to taxpayer savings. For example, a randomized control trial conducted in Memphis, Tennessee found significantly less government spending in terms of food stamps, Medicaid, Aid to Families with Dependent Children and Temporary Assistance for Needy Families per year for nurse visited families vs. control groups[10].

HSD criticism regarding the LFC cost estimate. Criticisms presented by the HSD against the LFC cost-benefit analysis of NFP involve cost and lack of nurses in the state to support implementation. The criticism of cost of NFP is not valid. In their response, the agency cites the *annual cost* as being $9,900 in Denver. However the $9,900 dollar figure refers to a total cost with NFP Denver participants enrolled to receive up to *30 months* of services. Therefore, the actual *annual cost* is almost identical to the New Mexico estimate of $4,000 per year. Furthermore, mothers visited by paraprofessionals instead of nurses also had a positive cost-benefit ratio in the Denver trial. The use of paraprofessionals lowered costs by another 30 percent. Moreover, both mothers visited by paraprofessionals and mothers visited by nurses had

[9] Lee, S., Aos, S., Drake, P., Miller, M., & Anderson, L. (2012). Washington State Institute for Public Policy, *Return on Investment: Evidence-Based Options to Improve Statewide Outcomes.* Document No. 12-04-1201

[10] Olds, D., Kitzman, H. J., Cole, R. E., Hanks, C. A., Arcoleo, K. J., Anson, E. A., Luckey, D. W., Knudtson, M. D., Henderson Jr, C. R., Bondy, J., & Stevenson, A. J. (2010). Enduring Effects of Prenatal and Infancy Home Visiting by Nurses on Maternal Life Course and Government Spending. *Archives of Pediatric Adolescent Medicine, Vol. 164, (No. 5),* (p. 419-424).

positive cost-benefit ratios. SAMHSA's national registry of evidence-based programs and practices also provides cost estimates for NFP with an average cost of $4,500 per family per year and a range of $2,900 to $6,500 per family per year. All of these cost estimates are below HSD's estimates provided in their response which range from $7,000 to $9,900 per family per year.

HSD claim that NFP has an inadequate research base. The HSD also claimed that NFP has an inadequate research base citing a single study done in New York State from the 1970's. This claim is not valid. Nurse-Family Partnership (NFP) is a widely researched, evidence-based program proven to be effective with diverse populations living in urban and rural settings as documented through peer reviewed publications. Additionally, NFP is the only early childhood program that meets the Coalition for Evidence-Based Policy congressional top tier evidence standard.[11] The Coalition cites three randomized controlled trials in their evidence summary for NFP. Each trial was conducted with different populations in different settings. Key findings include reductions in child abuse/neglect and injuries (20 percent to 50 percent) and reductions in subsequent births (10 percent to 20 percent), both costly outcomes for taxpayers. The Coalition also cites improvement in cognitive and educational outcomes for children of mothers with low health and intelligence such that children gain six percentile points in grade 1-6 reading and math achievement.[12]

HSD concerns regarding evidence-based programs in culturally diverse communities. The HSD raised concerns regarding the delivery of evidence based programs effectiveness in culturally diverse communities. Research suggests that such a concern is not valid for programs which have been evaluated in such communities. For example, a nine year trial on NFP in Denver, with a Hispanic population of 46 percent, showed significant effects on numerous categories of outcomes including pregnancy, child health and development, and maternal life-course. According to the US Census, the Hispanic population in New Mexico is 47 percent. Notably, researchers found a 37.1 percent reduction in domestic violence, a 66.3 percent reduction in maternal depression, and a 34.9 percent reduction in remedial services among participants. Participants also saw a 21.6 percent increase in earnings per year.[13]

Opportunities exist to expand evidence-based programming and improve upon existing programs. Whereas using internal program evaluation to set agency priorities is a best practice that should be implemented by all agencies, the proven effectiveness and cost savings of evidence based programs warrants immediate consideration. Given the amount of time it will take to fully evaluate 53 programs, and the current dire state of childhood outcomes in New Mexico, prioritized investments into proven evidence-based programs is needed. Implementation of proven evidence-based programs along with evaluation of existing programs need not be mutually exclusive. Fidelity is imperative to ensure that programs are effective, and several common characteristics of successful programs have been identified including small group sizes, high adult-child ratios and developmentally appropriate curriculum[14].

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[11] Congressional Top Tier Evidence standard, defined as: *Interventions shown in well-designed and implemented randomized controlled trials, preferably conducted in typical community settings, to produce sizable, sustained benefits to participants and/or society*

[12] Coalition for Evidence-Based Policy, *Top Tier Evidence Initiative. Evidence summary for the Nurse-Family Partnership.* http://evidencebasedprograms.org/

[13] Olds, D., Miller, T. R., Knudtson, M., Luckey, D., Bondy, J., Stevenson, A., Holmberg, J., Hanks, C., Kitzman, H., Anson, E., & Arcoleo, K. (2011). *Impact of the Nurse-Family Partnership on Neighborhood Context, Government Expenditures, and Children's School Functioning.* National Criminal Justice Reference Service, Rockville, Maryland, U.S.A.

[14] Center on the Developing Child. *Early Childhood Program Effectiveness.* Harvard University. http://developingchild.harvard.edu.

The opportunity now exists to target high needs populations with evidence-based programs and improve outcomes for participants and taxpayers alike. Over forty years of research have established that early childhood evidence-based programs have a range of outcomes that last a lifetime and those effective programs generate benefits that far exceed costs. Most of these returns can range from $4 to $9 per dollar invested and benefit the community though reduced crime, welfare, educational remediation, and increased tax revenues on higher incomes for program participants[14]. Evidence-based programs are based on rigorous experimental-based evidence and are proven to deliver benefits to participants and benefits that outweigh costs. The LFC recommends that the HSD immediately work with CMS to expand investment into evidence-based and federally recognized promising programs, such as NFP and First Born.

JC/svb