

# Babies in Minnesota

*The well-being and vulnerabilities of our youngest children*

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## Why report on babies?

Researchers in many fields agree. The physical, social, and economic health and well-being of adults and society as a whole are strongly influenced by the early experiences of children, when the foundation for effective cognitive and social skills and abilities are developed. Children who have developmental delays or disabilities require and often receive early intervention. Children who have adverse experiences or prolonged toxic stress associated with poverty, child abuse and serious neglect, parental substance abuse, neighborhood violence, or maternal depression also need interventions to build the foundational skills necessary to reach their full potential. The most cost efficient time to intervene—to break the cycle of

disadvantage for vulnerable children through providing access to comprehensive developmental, health, and educational resources—is in the very early ages.

This report provides a snapshot of how young children and their parents in Minnesota are faring, presenting indicators and trends with regard to births, newborns, infants, and toddlers as well as with regard to family strengths and stressors. When data are available, differences based on geography, income, and race/ethnicity are also noted.

The report concludes with both implications of the major trends and differences and effective strategies for improving the well-being of our most vulnerable young children.

## WHAT DON'T WE KNOW DUE TO LIMITED DATA?

- The birth certificate and vital records in Minnesota do not collect data on household income or poverty level of mothers who give birth. As a result, we do not know whether income disparities exist for many of the birth indicators.
- Several of the indicators presented in this report are tracked using national data sources (e.g. breastfeeding rates, parental leave, health care coverage, and immunizations), therefore, geographic data within Minnesota are not available.
- The state does not track data on well-child examinations, obesity, or mental health services for all children in Minnesota. Data on low-income children are presented, but we do not know how children overall are doing in these areas.
- Multiple agencies provide developmental and mental health screenings for children; more coordination is necessary to know whether all of Minnesota's children are screened and whether those with additional service needs are receiving services.
- We know little about the prevalence of several health indicators that are difficult to diagnose, such as maternal depression, asthma, autism, and fetal alcohol exposure.
- Finally, the Department of Corrections does not track data about the children of incarcerated parents in Minnesota.

## Key findings

- Most of the 286,580 children age 3 and younger in Minnesota are healthy, but a sizeable number (at least 15% to 20%) are vulnerable, as evidenced by—to the extent that data are available—inequities in access to services and in well-being.
- The most vulnerable children, particularly low-income children of color, make up a growing portion of Minnesota babies.
- For many of the indicators of health and well-being of our youngest children, the trends are relatively flat or have started to move in the wrong direction.
- Incomplete data and a lack of a comprehensive early childhood data management system leave many questions unanswered about access to services and the well-being of young children.

## Overview

Since 2000, the number of births in Minnesota has increased 9 percent to nearly 74,000. This increase is due to a 50 percent increase in the number of births to mothers who identify as African American (48% of them foreign-born), Asian, or Latina and a 24 percent increase in the number of American Indian babies, while the number of births to white mothers has remained the same.

Age and race of 286,580 children age 3 and younger in Minnesota in 2007:

Age		Race	
Under 1	71,854	White	77%
1-year-olds	67,321	Hispanic or Latino	9%
2-year-olds	72,283	African American	6%
3-year-olds	75,122	Mixed or other race	5%
		Asian	3%
		American Indian	1%

Overall, the picture is mixed regarding the well-being and vulnerabilities of our youngest children. Two key indicators of health and well-being—teen birth rates and well-child visits—are trending in the right direction. While prenatal care rates are good, they have been relatively flat. Other indicators which had been improving—infant mortality, immunizations rates, and hospital admissions for asthma—are now trending in the wrong direction. Moreover, beneath the surface, there are gaps in service access

and well-being, and those who are most vulnerable make up a growing portion of Minnesota babies.

Young children of color are among the most vulnerable. American Indians have lower rates of prenatal care and well-baby visits, and higher rates of teen births and infant mortality. Latinas have lower rates of prenatal care and higher rates of births to teenage mothers. African Americans have higher rates of low-birth weight babies and infant mortality. African Americans and American Indians make up a disproportionate number of babies in out-of-home placement, a number that has been trending up since 2000.

In most cases, babies and toddlers in the Twin Cities are more vulnerable than their counterparts in greater Minnesota—they are more likely to die as infants, be born low birth weight, be hospitalized for asthma, be obese, have elevated blood lead levels, and are less likely to be screened at age 3—though some of these disparities may be due to the fact that Minnesota’s communities of color are concentrated in the Twin Cities.

Low-income families and children have higher infant mortality rates, lower breastfeeding rates, higher rates of maternal depression, and are more likely to have elevated blood lead levels.

### ***How many Minnesota babies are vulnerable?***

Because we can’t analyze the extent of multiple risk factors per family or calculate an unduplicated number of vulnerable children, we cannot determine the total number of children age 3 and younger who are vulnerable, but we do know that about:

- 39,000 of our youngest children are being raised in poverty, and that number is climbing.
- 20,000 were born to teen moms, including about 3,400 to teen moms with one or more prior children.
- 2,527 are in out-of-home placements.
- 43,000 (15 percent of children age 3 and younger) have moderate or high risk for developmental, behavioral or social delay.
- 16,800 children age 2 and younger have special health care needs.
- 700 are homeless.
- 10 to 20 percent are cared for by mothers with depression.

## **Births**

### ***Number***

In 2007, there were 73,675 babies born in Minnesota, an overall increase of 9 percent since 2000. While the number has increased, the birth rate has remained steady at 14 births per 1,000 people.

### ***Race/ethnicity***

Most babies (74%) were born to white mothers in 2007. However, the population of our youngest children is becoming more diverse because the number of births to mothers of color has increased 50 percent from 2000 to 2007, while the number of births to white mothers has remained unchanged. The percentage increases from 2000 to 2007 by mother’s race are as follows:

- African American 52%
- Asian 51%
- Hispanic or Latina 50%
- American Indian 24%
- White 0%

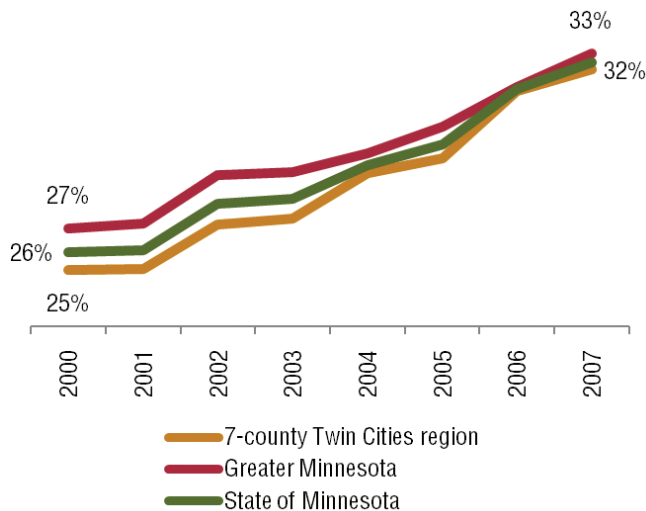
The proportion of births to foreign-born mothers has also increased from 14 percent in 2000 to 18 percent in 2007. The proportion of births to foreign-born mothers also varies by race/ethnicity of mother:

- Asian 81%
- Hispanic or Latino ethnicity 72%
- African American 48%
- White 4%

## Unmarried mothers

Of all the babies born in 2007, a third were born to unmarried mothers, up from 26 percent in 2000. This increase is largely due to a 76 percent increase from 2000 to 2007 in the number of births to unmarried women with at least some college education. However, the proportion of births to women with a high school education or less still make up the majority of births to unmarried mothers.

### BIRTHS TO UNMARRIED MOTHERS



The percentage of births to unmarried mothers has been higher in greater Minnesota; however the disparity has been decreasing.

Babies born to mothers of color are more likely to be born to unmarried mothers. The percentage of births to unmarried mothers by mother's race in 2007 is as follows:

- American Indian 85%
- African American 61%
- Hispanic or Latina 57%
- Asian 30%
- White 25%

## Teen births

In 2006, over 5,000 teens in Minnesota had babies, a rate of 28 per 1,000 teenage females, though the rate varies by race. More than 10 percent of Hispanic and American Indian teenage girls had babies, compared to less than 2 percent of white teens.

Since 1991, the teen birth rate decreased 25 percent overall, and by 41 and 55 percent, respectively, among white and African American teens, while the rate among Hispanic teens increased 45 percent.

Seventeen percent of the births to teen mothers in 2006 were subsequent births (second or more). More than 20 percent of births to minority teen mothers were subsequent compared to 12 percent of the births to white teen mothers.

	Teen births			Subsequent teen births (second or more)	
	Number (2006)	Rate (per 1,000) (2006)	Change in rate (1991-2006)	Number (2006)	Proportion of teen births
Hispanic or Latina ethnicity	839	115	45%	176	21%
American Indian	352	107	-20%	84	24%
African American	765	70	-55%	168	22%
Asian	467	59	NA	135	29%
White	2,689	18	-41%	323	12%
Statewide	5,090	28	-25%	877	17%

## Employment of caregivers

Sixty-three percent of children age 3 and younger in Minnesota had all of their primary caregivers in the workforce in 2005-2007, a rate that has remained largely unchanged since 2000 when the rate was 64 percent.

## Income

Public health insurance programs paid for 38 percent of births in 2007. (Pregnant women at or below 275% of the federal poverty guidelines qualify for Medicaid and MinnesotaCare.)

## Prenatal care

In 2007, 80 percent of women who gave birth in Minnesota received adequate or better prenatal care, a rate that has increased slightly from 77 percent in 2001.

However, the percentage of mothers receiving adequate or better prenatal care in 2007 varies by race:

- American Indian 45%
- Hispanic or Latina 65%
- African American 66%
- Asian 76%
- White 84%

## Birth weights

In 2007, 5,000 babies (7%) were born with low birth weights (less than 5.5 pounds), an increase from 6 percent in 2000, largely due to the increasing number of multiples being born. The rate is higher in the metropolitan area than greater Minnesota.

Rates of low birth weight babies are highest among African Americans and Asians and lowest for Hispanics and whites. The percentage of babies born at a low-birth weight in 2007 was:

- African American 11%
- Asian 8%
- American Indian 6%
- White 6%
- Hispanic or Latina ethnicity 5%

## Fetal alcohol exposure

Due to the difficulty of diagnosing fetal alcohol syndrome (FAS) and related illness, data on the prevalence of FAS are limited. Nationally, an estimated 2 out of every 1,000 babies are born with FAS, and 8 out of every 1,000 have alcohol related neurobehavioral disorder (ARND). In Minnesota, that is an estimated 700 babies born with FAS or ARND in 2007.

Data on mother's use of alcohol during pregnancy is limited. A national study from 1991-2005 found that 1 in 8 (12%) pregnant women use alcohol, and 2 percent binge drink. Neither rate substantially changed over the 15 year period of study. The highest percentages of pregnant women reporting alcohol use were 35-44 years old, college graduates, employed, or unmarried.

In Minnesota in 2006, 7 percent of mothers who have recently given birth report drinking during the last three months of pregnancy, a rate that has increased 50 percent since 2003. The highest percentages of women in Minnesota reporting using alcohol during their third trimester were higher income (\$50,000 or more a year), age 35 and older, some college education, or married.

Given the rates at which women report using alcohol, the number of babies exposed to alcohol in-utero could be as much as 10 times greater than the estimated prevalence rates.



## Newborns

### *Newborn screening*

The Minnesota Department of Health Early Hearing Detection and Intervention (EHDI) program works with health care providers and parents to ensure all newborns are screened for hearing loss by one month of age. In 2008, 68,922 newborns (97.3%) were screened for hearing loss, an increase from 82 percent in 2005. Less than 3 percent had confirmed hearing loss. Of those with permanent hearing loss (108 babies), 31% were enrolled in Help Me Grow/Early Intervention by 6 months of age.

### *Home visiting*

In Minnesota, from January 1 through June 30, 2009, staff from local public health departments made family home visits to 3,865 prenatal women and 11,401 infants and children younger than 36 months and their primary caregivers.

In 2008, the Metro Alliance for Healthy Families screened 2,044 first-time parents in the 7-county metro area; 80 percent at hospital sites. During 2008, 390 children under age 3 were in households receiving home visits.



### *Parental leave*

Nationally, 69 percent of first-time mothers who worked during their pregnancy took paid or unpaid maternity leave. Fifty-eight percent of these women were back at work 3 months after they gave birth. The rates of use of parental leave among working, first-time mothers has been increasing since 1960, as the percentage of women who quit their jobs at the time of their first birth has decreased.

A 1999 survey of Minnesota companies by Children's Defense Fund of Minnesota found that over half (56%) of female employees who were pregnant took less than 12 weeks of parental leave. Eighty percent of employers reported offering parental leave (paid or unpaid). Though only 4 percent of the companies surveyed offered paid maternity leave, most offered paid vacation, sick leave, or disability that mothers could use after the birth of their child.

## Infants

### *Breastfeeding*

According to national surveys, in 2006, women in Minnesota with a recent birth report:

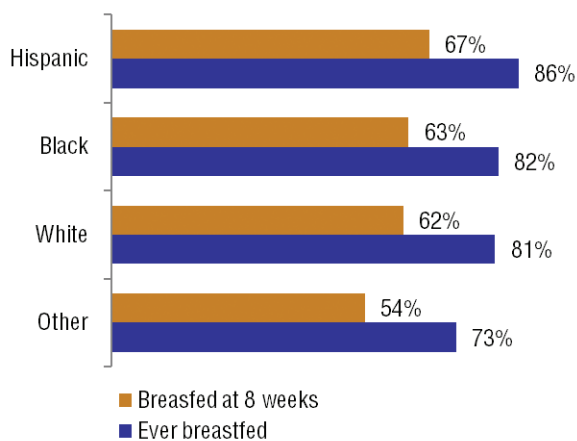
- 80% initiated breastfeeding
- 62% were breastfeeding at 8 weeks
- 52% were breastfeeding at 6 months
- 25% were breastfeeding at 12 months.

Rates of women who report ever breastfeeding remained relatively constant since 2002, though there have been slight increases in the percent of mothers who continue breastfeeding at 8 weeks, 6 months and 12 months. This indicates that although women are not breastfeeding in higher proportions, those that do may be continuing to do so longer.

Low income women are less likely to initiate breast-feeding. In 2006, 72 percent of women enrolled in Medicaid (either during pregnancy or postpartum) with a recent birth report they initiated breastfeeding, compared with 86 percent of women not enrolled in Medicaid.

Breastfeeding rates vary by race. Hispanic women are most likely to have ever breastfed, whereas women who identify as African American or “other” race are less likely to report having ever breastfed. Hispanic women are also most likely to be still breastfeeding at 8 weeks after delivery.

### MOTHERS WHO BREASTFEED, 2006



### Well-baby visits of low-income infants

Regular medical check-ups support the health and well-being of young children. The Child and Teen Checkups Program (C&TC) provides preventive health visits to children up to age 21 who are enrolled in Medicaid and MinnesotaCare. Participation ratios are determined by how many check-ups babies have relative to the number recommended; a participation ratio of 1.0 indicates children received all recommended checkups.

Statewide, the participation ratio for children under age 1 was 0.87 in 2008, an increase from 0.85 in 2005, indicating an increase in the rate at which low-income infants are receiving well-baby visits.

Rates vary by children’s race, however. Participation ratios in 2008 were:

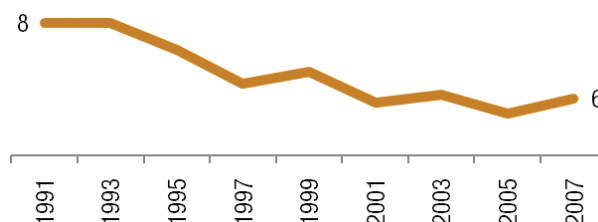
- White 0.85
- Asian 0.87
- African American 0.89
- American Indian 0.90
- Hispanic or Latino ethnicity 0.91

### Mortality (infant death rates)

In 2007, the infant mortality rate was 5.5 per 1,000 births (babies under 12 months of age). The rate decreased from 7.5 in 1991 to 4.6 in 2003, but has been increasing since then. Using Medicaid enrollment as a proxy for low income, the infant mortality rate in 2007 was higher among Medicaid-enrolled mothers than non-Medicaid mothers (6.4 versus 4.5 per 1,000 births).

### INFANT MORTALITY RATES

Per 1,000 births



The infant mortality rate in the metropolitan area was slightly higher for several, but not all, recent years.

Infant mortality is higher among populations of color. In 2006, infant deaths per 1,000 babies were:

- American Indian 11
- African American 9
- Hispanic or Latina 5
- White 5
- Asian 4

## Children age 3 and younger

### Access to services

#### Early screening

Minnesota has several programs aimed at screening babies and toddlers for mental health and developmental delays, with the goal of screening all children. In addition, children can be screened by private health care providers.

The Follow Along Program, administered through the Department of Health, provides monitoring and screening for early identification of health, social/emotional, and developmental problems for families with children age 3 and younger. Some counties offer screenings to all children, while others offer the program to those identified as being at risk.

In 2008, 25,595 children through age 3 (12%) participated in the Follow Along Program. A smaller percentage of children in the 7-county metro area participated (4%) compared with greater Minnesota (20-29%). Of the children that participated in 2008, 80 percent were white, a slightly higher percentage than all children age 3 and younger who are white.

The Minnesota Department of Education administers Early Childhood Screenings through the school districts. Early Childhood Screening identifies potential health and developmental problems and makes appropriate referrals for further health assessment or educational evaluation for 3- and 4-year-olds in order to address concerns that may impede children's learning, growth, and development before children start kindergarten at age 5. A screening, either through the program or another provider, is required for kindergarten entrance. Each year approximately 60,000 children receive early childhood screenings through the schools. In 2007-2008, 39 percent of those

screened were 3 years old, up from 23 percent in 2004-2005. In greater Minnesota, 45 percent of children receiving early childhood screenings were age 3 compared with 32 percent of those in the Twin Cities.

Early Head Start completed screenings for 1,944 out of 2,139 participating children in the 2007-08 program year.

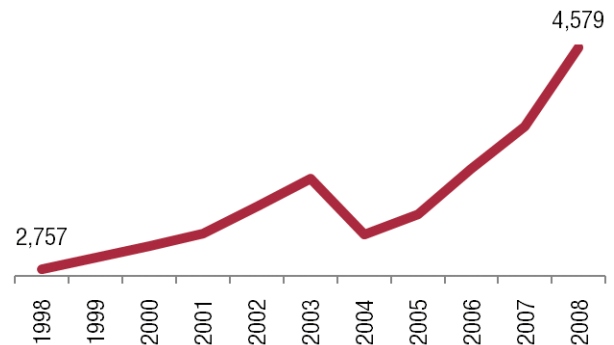
Foundations for Success, a 5-year initiative that provides early childhood mental health screenings to children through collaborating agencies in Ramsey County, has screened approximately 1,667 children under 4 from January 2005 through August 2009.

#### Early intervention

In 2008, 4,579 children age 2 and younger were being served by the federal Individuals with Disabilities in Education Act (IDEA) Part C, which requires states to provide special education services to infants and toddlers with disabilities. The number of children served by IDEA, Part C has increased 66 percent since 1998. The percentage of the population being served has also increased, from 1.5 percent in 2004 to 1.8 percent in 2007. The increase in the number and percentage of children being served in Minnesota may be due in part to revised and expanded eligibility criteria.

### SPECIAL EDUCATION SERVICES

#### Children age 2 and younger





In 2003, African American and American Indian children birth through age 2 were enrolled in special education at higher rates than the general population:

- American Indian 2.4%
- African American 2.1%
- White 1.8%
- Hispanic or Latino ethnicity 1.6%
- Asian 1.0%

### Well-child visits

Regular medical check-ups support the health and well-being of young children. Data from the National Survey of Children's Health indicate that 98 percent of Minnesota children age 3 and younger have had at least one preventative check-up in the last year, up from 81 percent in 2003. However, these data are limited, as the American Academy of Pediatrics recommends children under age 2 have 4-8 preventative health exams per year.

*Low-income toddlers.* The statewide participation ratio for toddlers (ages 1 and 2) in the The Child and Teen Checkups Program (C&TC) was 0.76 in 2008, a 6 percent increase over 2005. Rates vary by children's race, however. In 2008, American Indian toddlers had a significantly lower participation ratio than toddlers of other races:

- American Indian 0.67
- White 0.74
- Asian 0.75
- African American 0.79
- Hispanic or Latino ethnicity 0.81

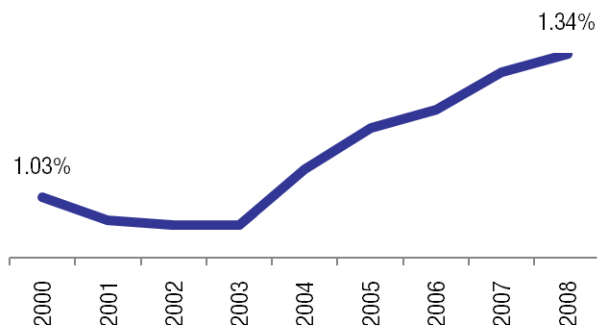
### Mental health services to low-income children

Mental health service-rate disparities are difficult to estimate for the age 3 and younger population because the entire population is relatively underserved and their needs for mental health services are probably under-identified. In 2008, 1,500 children birth through age 3 enrolled in Minnesota Health Care Programs (MHCP) received mental health care services (based on claims). This represented 1.3 percent of the children birth through age 3 enrolled in MHCP.

From 2000 to 2008, the proportion of children in MHCP receiving services from mental health professionals increased 40 percent. This may be due to increased training that has enabled providers to better identify children in need of mental health services.

### MENTAL HEALTH SERVICES

#### Low-income children age 3 and younger



In 2008, white children in MHCP received mental health services in higher proportion than minority children. Asian children received mental health services at rates significantly lower than statewide rates:

- Multi-racial 2.2%
- American Indian 1.6%
- White 1.5%
- African American 1.3%
- Asian 0.3%

### Early care and education

While most infants and toddlers (78%) are at home with their parents, grandparents, other family members, or friends of the family, over 17,000 infants (under 12 months of age) and 58,000 toddlers (12 to 35 months) in Minnesota are in licensed child care settings. Wilder Research studies provide some insight into childcare use in greater Minnesota:

- A 2006 survey of low-income families in Rochester for the First Steps initiative found that 41 percent of 1 year olds, 31 percent of 2 year olds, and 22 percent of 3 year olds were in parental care only. Altogether, about 38 percent were in parent care only, and 50 percent in FFN care.

- A 2007 survey of low-income households for the Minnesota Early Learning Foundation found that in rural Blue Earth and Nicollet Counties, 25 percent of children age 2 and younger were in parent care only and 37 percent were in FFN care only. In the urban core neighborhoods of Minneapolis and Saint Paul, 36 percent of children age 2 and younger were in parent care only and 41 percent were in FFN care only.

FFN caregivers meet the child care needs of many families, particularly low-income families from diverse racial and ethnic communities and families who need child care in the evening and on weekends when licensed care is generally not available. Most FFN caregivers, even those caring for young children from disadvantaged families, provide this care free and are not now served by child care subsidy programs or any other public programs.

Head Start is a federal program for families living below the federal poverty threshold. In Minnesota, there are 36 programs that provide Head Start or Early Head Start programming. For the 2006-07 school year, 47 percent of eligible 3-year-olds (5,834 children) were enrolled in Head Start, down from 71 percent (5,315 children) in 1999-2000, due to increases in the number of eligible children. Participation in Early Head Start for children birth through age 2 is lower, largely because Early Head Start is not available in all locations, though accessibility is increasing. In 2007, 7 percent of eligible children (2,644 children) were enrolled in Early Head Start, up from 4 percent (1,202 children) in 2000, due to increases in state funding.

School Readiness is a public school early childhood education program open to Minnesota children from age 3 years to enrollment in kindergarten. The goal of the program is to help preschoolers gain skills and behaviors for school success. Usually, children are identified to

participate in the program through Early Childhood Screening. In 2008, 8,045 3-year-olds participated in School Readiness across the state. No data are available on the income or race/ethnicity of participating children.

## Indicators of well-being

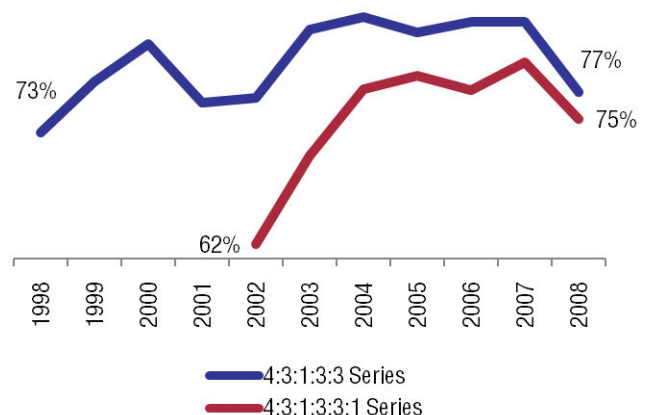
### Immunization rates

The Centers for Disease Control and Prevention recommend children receive a vaccines series by 19 months of age. Known as the 4:3:1:3:3 (number of doses) series consists of: Diphtheria, Tetanus, and Pertussis (DTaP); Polio; measles, mumps, and rubella (MMR); Haemophilus influenza (Hib); and Hepatitis B (HepB). The rate of immunization coverage for this series among Minnesota children age 19-35 months has been around 85 percent since 2003; however, the rate dropped to 77 percent in 2008.

The 4:3:1:3:3:1 series includes the vaccine for varicella (Chickenpox). The varicella vaccine was first licensed by the FDA in 1995, but did not become required for Minnesota kindergartners until 2004. (Note: Starting in the fall of 2009, Minnesota requires 2 doses of varicella vaccine for kindergarten entry.) Immunization coverage of children ages 19-35 months for the 4:3:1:3:3:1 series increased from 2002 to 2004, and has remained close to 80 percent since then.

### IMMUNIZATION COVERAGE

#### Children age 19-35 months



## Child maltreatment

From 2005 to 2008, the number of reports of child maltreatment that involved one or more children age 3 or younger averaged 7,600 per year, involving an average of 8,000 children under age 4 per year. In 2008, children under age 4 made up 31 percent of all children involved in child protection, up from 29 percent in 2005. [Note: This is a duplicated count of children, as a child could be involved in more than one report.] In addition, children of color are involved in child protection at much higher rates than the general population; 55 percent are children of color.

For the most serious reports of child abuse and neglect, counties and tribes conduct traditional investigations to determine whether the alleged maltreatment occurred. In other cases, families are offered Family Assessment Response (FAR), a strengths-based and family-focused method that works holistically with families to address children's and families' needs. In 2008, 57 percent of families with one or more children under age 4 involved with child protection received FAR, an increase of 40 percent since 2005.

However, the percent of child maltreatment reports receiving FAR in 2008 vary by race:

- American Indian 49%
- African American 52%
- Asian 59%
- White 59%
- Hispanic or Latino ethnicity 60%

## Out-of-home placements

In 2008, 2,527 children birth through age 3 (1%) were in out-of-home care. Children under age 4 make up a larger proportion of all children in out-of-home care than they did in 2000; 19 percent of those in out-of-home care were under age 4 in 2008, compared to 12 percent in 2000. Children in out-of-home care are more likely to have disabilities than other children. Among children under age 4 in out-of-home care in Minnesota,

11 percent have identified disabilities, compared to less than half a percent of all Minnesota children.

The largest group (988) in out-of-home care are white children, but African Americans (524) and American Indians (423) make up a disproportionate share.

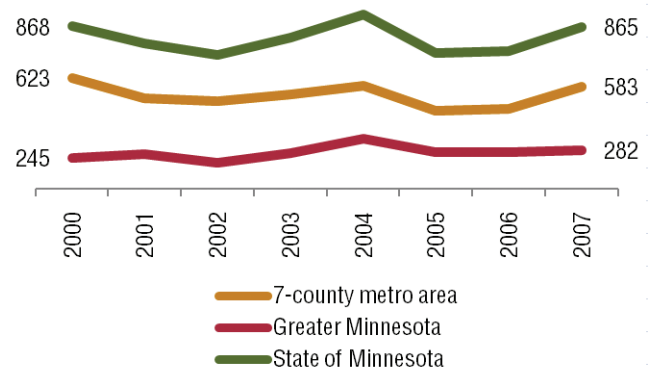
## Asthma

Data on the prevalence of asthma among children under age 4 are limited. Results from the 2003 National Survey of Children's Health indicated that 2.3 percent of children birth through age 3 in Minnesota had asthma, and 1.4 percent were currently impacted by asthma. Results from the 2006 Hennepin County SHAPE survey indicated that 4.8 percent of the children birth through age 3 in Hennepin County had been diagnosed with asthma, and 3.3 percent currently had asthma.

In 2007, there were three hospital admissions due to asthma per every 1,000 children age 3 and younger, a relatively low rate. However, hospitalizations due to asthma present the most serious cases of asthma or cases that are going untreated.

Rates of hospital admissions due to asthma are higher in the Twin Cities than greater Minnesota. In comparison, there are 9 emergency room visits due to asthma per every 1,000 children – 3 times the rate of hospital admissions primarily due to asthma.

## RATE OF ASTHMA HOSPITAL ADMISSIONS Per 1,000 children age 3 and younger

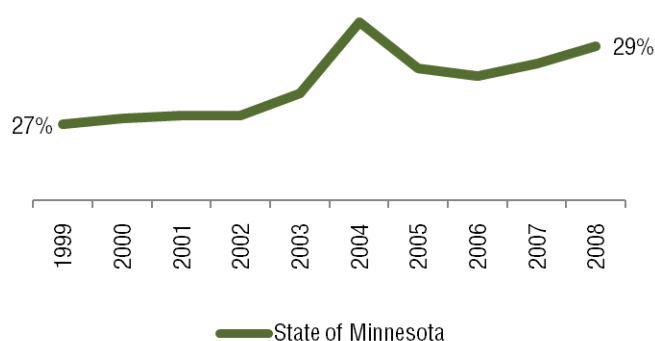


## Obesity

Minnesota does not have a statewide monitoring system for tracking the prevalence of overweight children. In lieu of statewide data, data from MDH on low-income toddlers (age 2 and 3) who participate in Women, Infants, & Children (WIC) are used. Children in WIC are classified as overweight if they fall into the top fifteen percentage-adjusted body weights. In Minnesota, 29 percent of WIC participants ages 2 and 3 were overweight or at risk for obesity. This rate has trended slightly upward since 1999 when the statewide rate was 27 percent.

Rates of overweight and risk for obesity among 2- and 3-year-olds in WIC are similar in the Twin Cities and greater Minnesota.

### OVERWEIGHT OR AT RISK FOR OBESITY 2- and 3-year-olds in WIC (85% percentile and above)



Other national studies have shown increasing trends in childhood obesity. A study in Massachusetts found that the prevalence of overweight (weight-for-height greater than or equal to the 95th percentile) among infants and toddlers increased 59 percent 1980-81 through 2000-01 for all ages, with the 96 percent increase in the prevalence of overweight among 2-year-olds. In addition, increases in the prevalence of overweight were greater for Medicaid-enrolled children, Hispanic and African American children (Kim et al., 2006).

A national study of 3-year-olds conducted between 1998 and 2000 found that the prevalence of overweight and obese children was higher among Hispanic children than African American or white children. Forty-four percent of Hispanic 3-year-olds were overweight or obese compared with 32 percent of the non-Hispanic toddlers surveyed (Kimbrow et al, 2007).

## Lead levels

Babies and toddlers are especially vulnerable to the toxic effects of lead. In 2008, over 80,000 children birth through age 3 (27%) were screened for elevated lead levels. The percentage of children tested age 9 to 30 months has increased at a faster rate than for older children, indicating children are being screened at a younger age, which is optimal for reducing additional impacts.

In 2008, 1 percent of children birth through age 3 that were tested had elevated blood-lead levels (10 µg/dL or greater), a rate that has been decreasing over time as more children get tested. Children in the Twin Cities have slightly higher rates of elevated blood-lead levels than in greater Minnesota. Though the rate of all children with elevated lead levels has been decreasing, low-income children (those enrolled in Medicaid) have elevated blood-lead levels at rates 2 to 3 times higher than children who are not. Additionally, children of color have the highest rates of elevated blood-lead levels, though rates have been declining.

## Special health care needs

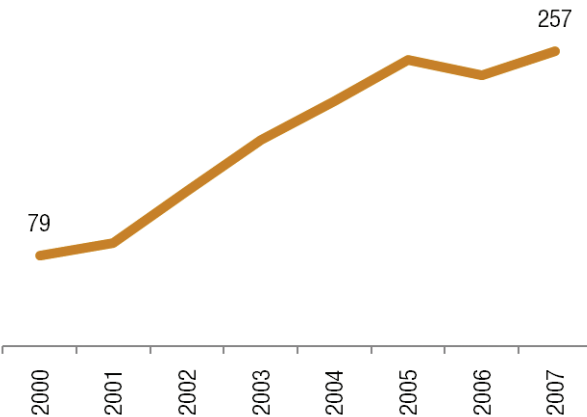
The Minnesota Department of Health estimates that 16,824 (8%) children under age 3 had a special health care need in 2006, up from 11,813 (6%) children under age 3 estimated to have a special health care need in 2003. More data are necessary to understand why.

## Autism

The prevalence of autism among Minnesota's infants and toddlers is not known; however, the number of 3 year olds being provided special education services through the school districts due to Autism Spectrum Disorder (ASD) increased 225 percent from 2000-2007.

### AUTISM

#### Number of 3-year-olds



In the Minneapolis Public Schools (MPS) district, in particular, the proportion of children receiving services for ASD increased each year from 2005-06 to 2007-08. In addition, Somali children age 3 and 4 receive special education services in MPS for ASD at rates 2 to 7 times higher than children of other racial/ethnic groups.

### Developmental progress

Data from the 2007 National Survey of Children's Health indicates that 26 percent of parents of children in Minnesota age 6 months through 3 years had concerns about their child's development status, down from 29 percent in 2003. In addition, 15 percent of those surveyed were identified as being at moderate or high risk for developmental, behavioral or social delay, down from 20 percent in 2003.

## Family strengths and stressors

### Health care coverage

According to the Minnesota Health Access Survey, in 2007, 3 percent of children under age 4 were uninsured, down from 4 percent in 2001. Of those insured, 70 percent were covered through group (employer-based) coverage, 24 percent were publicly insured, and 6 percent were insured through private insurance purchased on the open market. Similarly, Minnesota data from the 2007 National Survey of Children's Health indicates that 4 percent of children under age 4 were uninsured, down from 6 percent in 2003. In both cases, the decrease in the uninsured corresponds with increases in the percent publicly insured.

### Welfare use

The Minnesota Family Investment Program (MFIP) is the state's welfare reform program for low-income families with children. In 2008, over 30,000 children birth to age three were involved in MFIP cases. This is a decrease of 23 percent since 2003, when the number of children involved in MFIP peaked. The decline from 2003 to 2005 is largely due to the Diversionary Work Program (DWP), which began enrolling participants in July 2004. Prior to 2004, families involved in DWP would have been enrolled in MFIP. Children of color make up a disproportionate share of the children involved in MFIP. In 2008, 71 percent of children on MFIP were children of color.

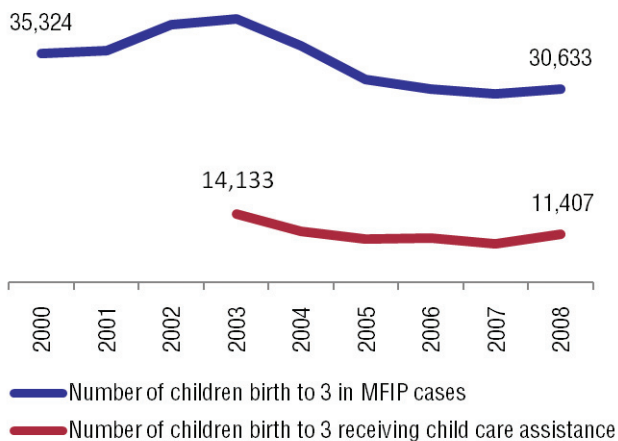




## Child care assistance

Similarly, in 2008, over 11,000 parents received child care assistance for children age 3 and younger either through MFIP or the Basic Sliding Fee (BSF) program, a decrease of 20 percent since 2003, due to changes in the eligibility requirements and reductions in funding.

### CHILD CARE ASSISTANCE Children age 3 and younger in MFIP



## Parent education and parenting

Early Childhood Family Education (ECFE) provides education and support to expectant parents and parents with young children. Given that most children participate in mixed age group classrooms, it is difficult to know the degree ECFE is serving parents of children birth through age 3. However, data from the Minnesota Department of Education indicate that approximately 10 percent of children per year from birth to kindergarten participate in ECFE, and program participants generally reflect the surrounding communities.

Data on the number and percentage of parents who read or tell stories to their children are limited. Results for Minnesota from the 2007 National Survey of Children's Health indicated that 62 percent of children age 3 and younger are read to every day, compared to 59 percent in 2003. Results from the 2006 Hennepin County SHAPE

survey indicated that 69 percent of parents with children birth through age 3 read or told stories to their child.

## Poverty

The federal poverty threshold (100% of poverty) for a family of four in 2009 is \$22,000 a year. The American Community Survey estimates that 39,300 children age 3 and younger (14% of the population), were living at or below this threshold in 2007, up from 30,600 children (12% of the population) in 2000. An additional 43,600 children under age 4, for a total of 82,900 (30%), are living at or below 185 percent of the poverty threshold.

The number and percentage of Minnesota children age 3 and under living in poverty in 2007 were:

• American Indian	1,069	47%
• African American	7,891	43%
• Hispanic or Latino ethnicity	6,589	27%
• Asian	1,672	19%
• White	19,761	9%

Results from the 2007 National Survey of Children's Health indicate that 5 percent of Minnesota's children birth through age 3 live in "working poor" households, in which the parents are employed full-time with incomes less than 100 percent of the federal poverty level.

## Housing and homelessness

Forty percent of children age 3 and under in Minnesota lived in households that were cost-burdened (households that spend more than 30 percent of their income on housing costs) in 2005-07. A larger portion of children age 3 and under in the Twin Cities live in cost-burdened households than in greater Minnesota (42% vs. 37%). In 2005-07, the percentage of Minnesota children age 3 and under living in cost-burdened households was:

• African American	58%
• Hispanic or Latino ethnicity	51%
• American Indian	47%
• Asian	43%
• White	36%

Wilder Research's 2006 Homelessness Study documented 679 children birth through age 3 in Minnesota living with a homeless parent, an increase from 550 children in 2003. Sixty-four percent of these children were in the Twin Cities. Children of color make-up a disproportionate share of the children living with a homeless parent; 70 percent were children of color. An additional 278 children had homeless parents, though they were not living with them at the time of the study.

### *Maternal depression*

According to a national survey, in 2006, 12 percent of Minnesota mothers with a recent birth experienced frequent postpartum depressive symptoms. Mothers enrolled in Medicaid (either during pregnancy or postpartum) were over three times as likely to report frequent postpartum depressive symptoms – 20% vs. 6%.

Rates at which mothers experience frequent postpartum depressive symptoms vary by race:

- Women of “other” race                    32%
- Hispanic or Latina                         19%
- African American                         13%
- White                                         9%

A 2006 Wilder Research survey of low-income families in Rochester for the First Steps initiative found that 26 percent of the respondents (primarily mothers) report they sometimes, usually, or always feel so sad and hopeless that they are concerned about their ability to cope with personal or family concerns (compared with 7 percent for higher-income mothers).

A 2007 Wilder Research survey of low-income households for the Minnesota Early Learning Foundation found that in rural Blue Earth and Nicollet Counties, 19 percent of mothers of young children reported sometimes or often feeling so sad or hopeless that they couldn't cope with personal or family concerns. In the urban core neighborhoods of Minneapolis and Saint Paul, 37 percent reported feeling that way.

### *Incarcerated parents*

The Minnesota Department of Corrections does not track whether inmates have children. Nationally, it is estimated that over 400,000 children age 4 and younger had a parent or parents that were in a state or federal prison in 2004; a 20 percent increase over 1997. Almost all of these children (93%) had a father in prison, while 7 percent had a mother; and less than 1 percent had both. Based on these national numbers, it can be estimated that up to 4,800 Minnesota children age 4 and younger had a parent in prison in 2004. Due to the fact that racial characteristics of Minnesota vary greatly from that of the United States at large, this number is likely overestimated.

### *Families with multiple risk factors*

Families and children face multiple risk factors.

Statewide data are limited on the number of children that are experiencing multiple challenges. However, data from two programs provide insight into the many challenges families with young children are facing:

- In a study of the comprehensive early childhood initiative, Invest Early, in Itasca County, Minnesota, families with children under age 3 had, on average, 5 risk factors. The top risk factors these families face are: family stress, isolation, history or evidence of developmental delays, and medical concerns of the child.
- In an evaluation of the Metro Alliance for Healthy Families, which serves first-time parents and their infants residing in the 7-county metro area who are at significant risk for poor health, social, and cognitive outcomes, three-quarters of the 357 parents had three to nine risk factors, most commonly poverty, depression, lack of family support, family conflict, and drug and alcohol abuse.

## Implications

### *What can be done to improve the well-being of vulnerable babies?*

When addressing the adverse early childhood experiences of vulnerable babies in Minnesota, we must learn how to best build on the strengths of families and to improve what's wrong with families without inflaming bias and stereotypes. It is equally important to learn what has happened to families, what's wrong with how service systems are organized, and what's getting in the way of access and opportunity.

A 2007 Harvard University report from the Center on the Developing Child combines extensive scientific research on early childhood brain and cognitive development with program evaluation to provide a framework for a cohesive, effective, viable policy agenda. The report, *A Science-Based Framework for Early Childhood Policy: Using Evidence to Improve Outcomes in Learning, Behavior, and Health for Vulnerable Children*, argues that early, intensive care and support for vulnerable children and families leads to strong returns on investment. This includes prenatal care, medical care, home visiting, and high-quality early care and education. Intensive services targeted at toxic stressors, such as abuse, neglect, maternal depression, parental substance abuse, or family violence can prevent disruptions in brain development and promote healthy developmental outcomes. No single program approach or delivery method has been shown to be the gold standard. In fact, a diversity of approaches has been shown to be effective, especially given the broad range of issues to address. The key is to establish common quality standards and to monitor fidelity to the models and results.

Improving the development and life-chances of vulnerable babies requires behaviors and policies that also improve the development and life-chances of their young mothers, preferably before, but certainly after, the birth of their first child.

**At the level of personal and family responsibility,** behaviors—such as staying in school and avoiding pregnancy—that support child and adolescent health, development, and well-being increase the chances of mothers and children staying out of poverty.

**At the local level,** resources are needed to improve and support the capacity of community-based organizations to tailor and target services for specific populations as well as to facilitate collaboration with other organizations at the local and state levels.

**At the service system level,** policies—developed in conjunction with families, service providers, and intermediary organizations representing the most vulnerable children—are needed that support both culture-specific and evidenced-based services targeted to the most vulnerable mothers and children with regard to:

- Improving the cultural sensitivity and appropriateness of services to reach families of color and those for whom English is not their primary language.
- Preventing teen births through evidenced-based strategies such as youth development programs, comprehensive sexuality education, and family planning services and connecting teen parents with school, jobs, and parenting and social support through community-based, holistic services.
- Improving access to prenatal care and adult mental health services.

- Linking services across agencies, such as services provided by economic assistance and child welfare programs (e.g., MFIP Family Connections) and services provided by public health clinics and parenting programs.
  - Increasing the use of standardized developmental screenings, including social-emotional developmental screening, across early care and education and primary health care settings, improving the coordination of screenings by the various screening agencies, and improving community outreach and access to early intervention and special education services.
  - Supporting parents and child development through high-quality home visiting as part of a comprehensive and coordinated service system that interconnects early intervention, early learning, health and mental health care, and family support.
  - Recognizing the extent to which family, friend, and neighbor (FFN) caregivers have a role in early childhood development and maximizing the early learning that takes place in FFN care homes on a voluntary, not a regulatory, basis through caregiver training and support.
- Finally, Minnesota is in the early stages of planning an **early childhood data management system** that will provide information about young children and their families and the public services they receive. This information will be useful for basic program monitoring, evaluation, improvement, and accountability. It should also be comprehensive so that it is useful for identifying and analyzing gaps in service access and disparities in well-being and other outcomes based on geography, income, and race/ethnicity. To that end, the system must:
- Operate with a unique identifier for individuals with appropriate privacy protection.
  - Link individual records across all programs in early care and education, education, health, nutrition, family support, early intervention, and human services that serve young children and their families.
  - Link to the K-12 longitudinal data system.
  - Incorporate additional data needed to inform state policy such as data on FFN care, data on the child care workforce, and other data useful for tracking progress on achieving goals and assessing impacts of policies and services on young children and their families.
  - Involve diverse stakeholders (cross-disciplinary, cross-cultural, local and state levels) in planning the data system, deciding what data are important to collect; identifying necessary changes for existing data and methods; developing indicators and methods for collecting data appropriate to natural learning and support systems; making the system available and transparent for use at all levels; and appropriately addressing issues of ethnicity, language, and culture in the system development process.



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