

IV. HEALTHY PEOPLE IN EVERY STAGE OF LIFE (STRATEGIC IMPERATIVE ONE)

HEALTHY START: BIRTH TO SIX

KEY ISSUES

- Death and disability from preventable injuries remain a concern for the area's children.
- Manchester and Manchester HSA mothers are more likely to be unmarried at the time of birth, have less than a high school education, and have smoked while pregnant compared to the rest of New Hampshire.
- A higher proportion of births in Manchester result in low-birth weight infants.
- Hospitalization for acute Ambulatory Care Sensitive Conditions for children from birth to age 4 in Manchester and the HSA is significantly greater than in the rest of the state.
- Many children in Manchester HSA are born into circumstances that adversely affect their health and development. For example, aging housing stock in the City is associated with high levels of lead exposure, and poverty is associated with higher levels of childhood anemia.

OVERVIEW

Promoting the health of young children before five years of age could save society up to \$65 billion in future health care costs according to an examination of childhood health conducted by Johns Hopkins Bloomberg School of Public Health.¹⁴ From this study it was determined that unintentional injury, tobacco exposure, obesity, and mental health contribute substantial burdens to the health of pre-school children and are precursors to a variety of health problems throughout the lifespan.

DEMOGRAPHICS

POPULATION OF 0-5 YEAR OLDS IN HSA, 2000		
HSA TOWN	NUMBER	PERCENT OF TOWN'S POPULATION
Manchester	7,162	6.7%
Auburn	327	7.0%
Bedford	1,329	7.3%
Candia	265	6.8%
Deerfield	268	7.3%
Goffstown	895	6.5%
Hooksett	764	6.5%
New Boston	316	7.6%
<i>Source: United States Census Bureau, 2000</i>		

POPULATION OF 0-5 YEAR OLDS IN MANCHESTER, 2007			
AGE GROUPS	NUMBER IN 2007	PERCENT OF MANCHESTER POPULATION, 2007	ACROSS NH, PERCENT OF POPULATION, 2007
Under 3 years	4,830	4.4%	3.3%
3 and 4 years	3,994	3.7%	2.4%
5 years	1,189	1.1%	1.1%
All children 0-5	10,013	9.2%	6.8%
<i>Source: American Community Survey 2007</i>			

CURRENT HEALTH

CAUSES OF DEATH

The leading causes of death for children 0-4 years of age in Manchester, the HSA, and New Hampshire from 2001 to 2006, are summarized below.¹⁵

- Perinatal conditions
- Congenital malformations, deformities and chromosomal abnormalities
- Unintentional injury (accidents)
- Cerebrovascular diseases
- Malignant neoplasms

The rate for each cause of death is not significantly different when comparing Manchester to the HSA or to the rest of New Hampshire from 2001 to 2006.

Low Birth Weight and Very Low Birth Weight

Infants born with a low birth weight (LBW) are at a higher risk of infant mortality and of long-term health issues than babies born at a normal weight.¹⁶

In the past decade some maternal and child health outcomes in Manchester have improved; however, there remains reason for concern regarding indicators associated with higher infant mortality such as low birth rate (LBW is <2500 grams or 5.5lbs) and very low birth weight (VLBW is <1500 grams or 3.3 lbs).¹⁵ The Healthy People 2010 national target for LBW is no more than 5.0% of all births and for VLBW no more than 0.9% of all births.¹⁷ Both the HSA and City of Manchester exceed these targets.

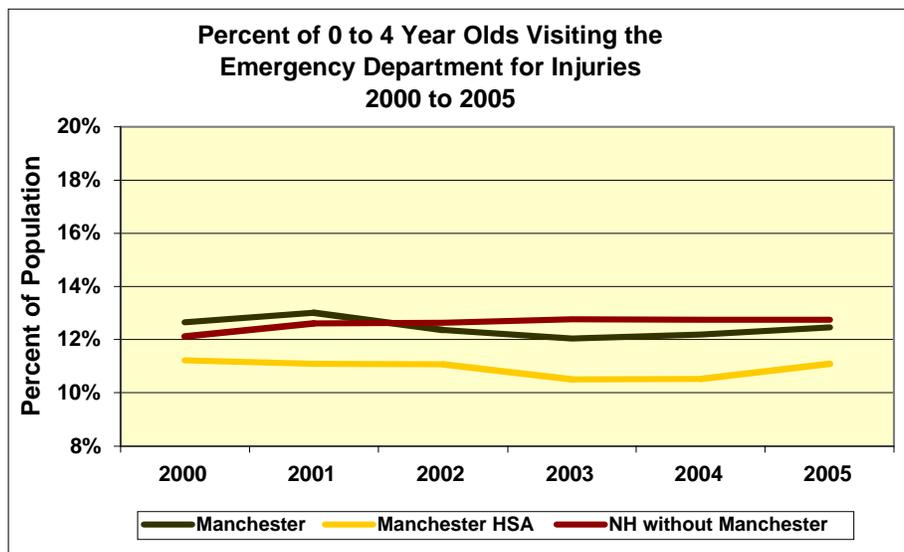
In the HSA in 2006, 305 births resulted in LBW or VLBW babies who were immediately at increased risk for poor health outcomes (see table on next page).

LOW BIRTH WEIGHT AND VERY LOW BIRTH WEIGHT RATES				
	MANCHESTER 2006	MANCHESTER HSA 2006	NH WITHOUT MANCHESTER 2006	HEALTHY PEOPLE 2010 TARGET
Infant Mortality (rate/1,000)	1.9 (0.4-5.4)	1.3 (0.3-3.7)	1.7 (1.1-2.6)	4.5
Low Birth Weight	6.8%	5.8%	5.5%	5.0
Very Low Birth Weight	1.6%	1.6%	1%	0.9

Source: NH DHHS, Healthy People 2010

Unintentional Injury - Accidents

Nationally, injuries and accidents cause the most disabilities and deaths among pediatric populations, affecting 20% to 25% of this age group annually. Infants have the second highest injury rate of all groups of children. Many injuries are preventable and are associated with the surrounding environment. Toddlers and preschoolers experience a large number of falls and poisonings as they are active and inquisitive and have not fully developed logic abilities.¹⁸ The graph below depicts the percent of children from birth to four years from Manchester and Manchester HSA who went to the emergency department to be treated for injuries from 2000 to 2005.



Source: New Hampshire DHHS

Trends in Emergency Department (ED) use for injury trends for this age group in the City of Manchester are similar to the rest of New Hampshire, but significantly higher than those of the HSA.¹⁵

VISITS TO AN EMERGENCY DEPARTMENT FOR INJURIES AMONG CHILDREN AGE 0 TO 4 IN 2005			
	# OF ED VISITS	% OF CHILDREN 0-4	95% C.I.
Manchester	846	12.5%	(11.7-13.2%)
Manchester HSA	1,207	11.0%	(10.4-11.6%)
Rest of NH	8,505	12.7%	(12.5-13.0%)

Source: Manchester Health Indicators, Hospitalization Data from Office of Health Statistics and Data Management, NH DHHS

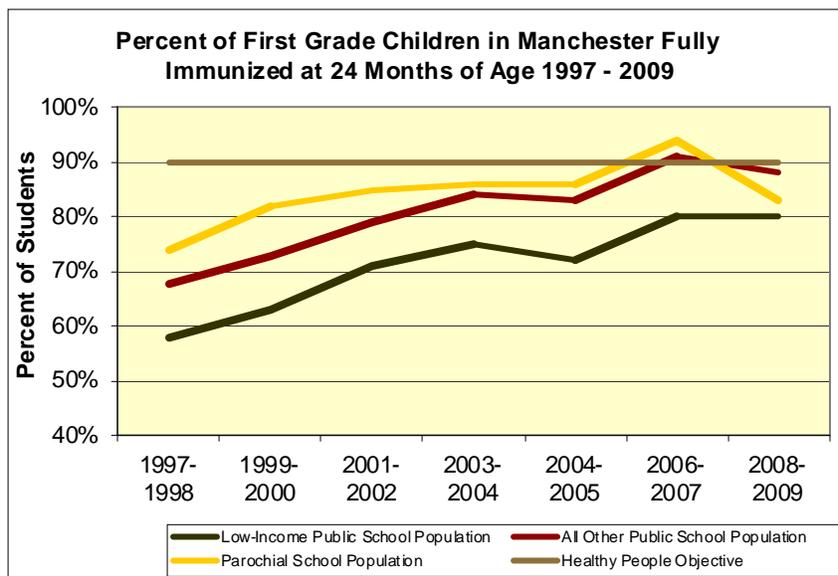
ACCESS TO HEALTH CARE SERVICES

ACCESS TO CARE

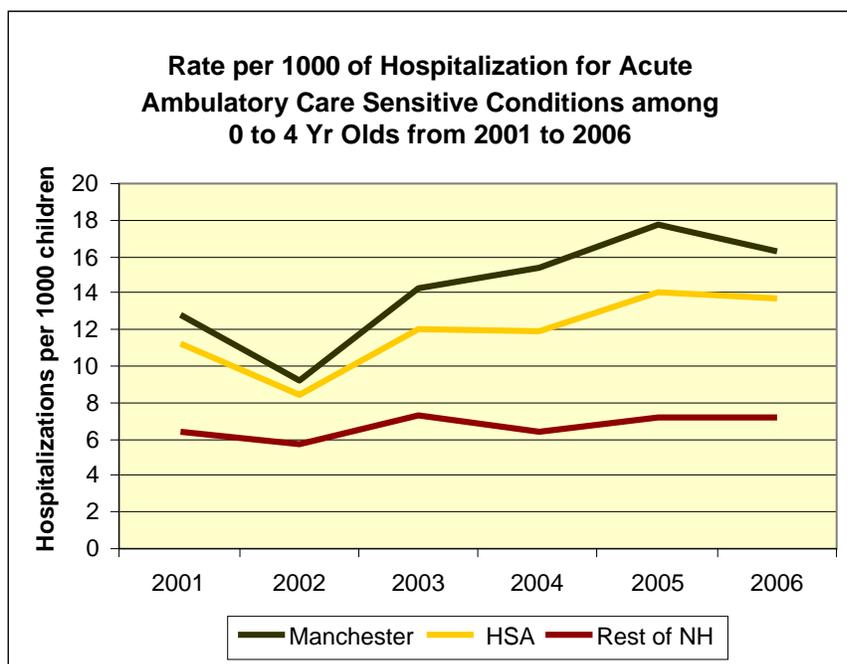
In order for children to achieve optimal health, they should have regular access to high-quality medical and oral health care including access to preventive health services such as immunizations and screening tests, as well as counseling designed to support change in the personal health behaviors of patients or families before clinical disease develops.¹⁹

Immunization is among public health's greatest achievements within the past century and remains the foremost weapon in the battle against vaccine-preventable diseases. The graph illustrates the percent of first grade children in Manchester who were fully immunized with the 4:3:1 series at 24 months of age from 1997-2009 (% immunized = DPT/DTaP 4, Polio 3, MMR 1). Concentration of need persists in some neighborhoods within the community. For example, the low-income public school population (Title I schools) in Manchester continue to have immunization rates below the Healthy People 2010 target of 90% coverage by age two.²⁰

Ambulatory care sensitive conditions, such as diabetes and asthma, are conditions where appropriate outpatient care can prevent or reduce the need for admission to a hospital. A disproportionately high rate of such conditions has been associated with barriers to access to primary care.²¹ Hospitalization of children from birth to age four in Manchester and the HSA for acute Ambulatory Care Sensitive Conditions is significantly greater than in the rest of the state.



Source: Manchester Health Department



Source: Office of Health Statistics and Data Management, NH DHHS

RISKS TO FUTURE HEALTH

Risk factors that can impede healthy childhood development include environmental and economic factors. Communication, collaboration and partnerships among multiple community systems are warranted to address the environmental health needs of children and families.²²

PREGNANCY ENVIRONMENT

Parents and care givers can help assure the health of their children by: (a) getting timely and appropriate prenatal care, (b) not smoking during pregnancy or around their children in their homes, and (c) creating a safe home environment.

MATERNAL AND INFANT HEALTH INDICATORS, 2006			
	MANCHESTER	MANCHESTER HSA	STATE OF NH WITHOUT MANCHESTER
Tobacco Use During Pregnancy	19.7%*	16.1%	17.5%
Late or No Prenatal Care	2.6%*	2.2%*	1.3%
First Trimester Prenatal Care received among all pregnant women	73%*	75%*	68%
White pregnant women	74%*	77%*	68%
Non-White pregnant women	67%	69%	66%
* Difference between Manchester and NH is statistically significant by z score Source: NH DHHS			

The proportion of women who smoke during pregnancy in Manchester in 2006 (19.7%) was significantly higher than in the HSA (16.1%) or the rest of the state (17.5%). Women who smoke during birth are more likely to give birth prematurely, have complications in birth, and give birth to a low-birth weight baby.²³

Compared to the rest of the state (2006), a significantly higher proportion of pregnant women in Manchester and its HSA received prenatal care within their first trimester of pregnancy (73% Manchester, 75% Manchester HSA, vs. 68% state without Manchester). It is important, however, to note that in both Manchester and the HSA a higher percentage of white women received first trimester care compared to non-white women.

During the same year a significantly higher proportion of Manchester and Manchester HSA pregnant women received prenatal care late in their pregnancies or not at all (Manchester 2.6%, n=42 ; Manchester HSA 2.2%, n=52) compared to the state (1.3%, n=170). Thus, of all the pregnant women in the state who received late or no prenatal care, 25% were from Manchester HSA.

PHYSICAL ENVIRONMENT AND SAFETY

The City of Manchester was declared a high-risk community for lead poisoning due to the abundance of older housing stock with lead paint. Approximately 43.8% (2007) of Manchester's housing was built prior to 1950.²⁴ Based on the City's high-lead risk designation, a universal screening approach is recommended (i.e., all one and two year old children are screened for high lead levels). Since 2000, a total of 19,602 children under age six have been screened for blood lead and 583 children have been identified as having an elevated blood lead level ≥ 10 ug/dl.

BLOOD LEAD SCREENING AND ELEVATED BLOOD LEAD AMONG CHILDREN UNDER 6 IN MANCHESTER AND NEW HAMPSHIRE, 2008			
	NUMBER OF CHILDREN SCREENED FOR BLOOD LEAD	NUMBER OF CHILDREN WITH NEW CONFIRMED ELEVATED BLOOD LEAD (>=10 UG/DL)	CONFIRMED ELEVATIONS/TOTAL CHILDREN SCREENED
Manchester	2,524	49	1.9%
New Hampshire	15,545	140	0.9%

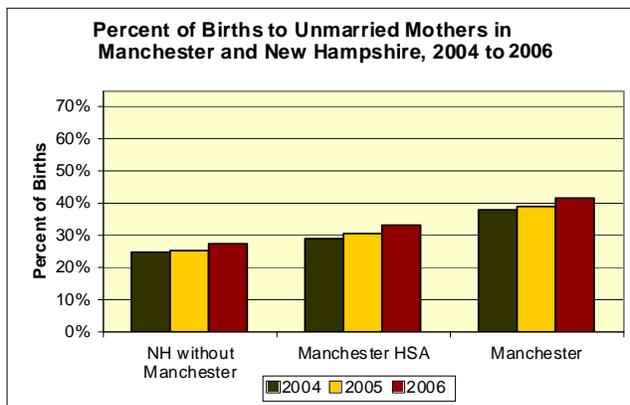
Source: New Hampshire Childhood Lead Poisoning and Prevention Program.

Lead poisoning can have broad affects on children including intellectual and behavioral deficits.²⁵ The table below outlines blood lead screening data from 2006 to 2008 within the City of Manchester.

2006-2008 BLOOD LEAD SCREENING: BLOOD LEAD LEVELS AND ELEVATED BLOOD LEAD AMONG CHILDREN SCREENED					
TOWN	PRE-1950 HOUSING %	AGE GROUP (MONTHS)	2006	2007	2008
Manchester	43.8%	12-23 screening	77.5%	75.1%	73.6%
		24-35 screening	38.6%	52.1%	45.9%
		12-35 elevations	2.7%	2.0%	1.9%

Source: NH Childhood Lead Poisoning Prevention Program, 2008

FAMILY AND SOCIAL ENVIRONMENT

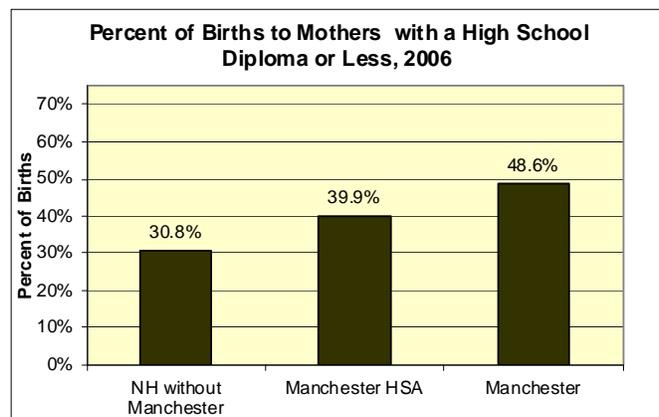


Source: NH DHHS

Family structure may influence early child well-being. For example, children in households with single parents are at higher risk of disadvantages, such as living in a household with food insecurity.²⁶ Single-parent households may have lower incomes, and in turn may experience challenges accessing medical and oral health care, including routine preventive care. Since 2001, increasing numbers of children in the HSA and City have been born to unmarried mothers.

EDUCATION

The first years of life are considered the most important for cultivating the foundation for success throughout the life span. Children are learning from the time of birth and they thrive on stable and nurturing relationships, which encourage their curiosity and learning potential. Children flourish when their care providers are learners themselves.²⁷ A measure of maternal education may be a predictor of a parents' ability to encourage children to grow and learn. The percent of births to mothers with a high school diploma or less has been consistently higher in Manchester than the HSA and the rest of the state since 2000.¹⁵



Source: NH DHHS

POVERTY

Children who live in poverty may achieve lower levels of education, be less likely to be gainfully employed, and will have an increased chance of living in or near poverty.²⁸ The percent of Manchester families with children living below 100% of poverty has risen significantly over the past two decades. Among Manchester children for whom poverty information can be calculated, approximately 30% of children 0-6 years of age are living at 100% of poverty. Approximately 42% of children 0-6 years of age are living at or below 185% of poverty.⁸ The tables below provide important data about family poverty for the years 1990, 2000, and 2007 for Manchester, Manchester HSA towns, and New Hampshire.

MANCHESTER FAMILIES LIVING BELOW 100% OF POVERTY			
	1990 U.S. CENSUS	2000 U.S. CENSUS	2007 AMERICAN COMMUNITY SURVEY
Families with Related Children Under 18 Years	9.9%	12.3%	20.2%
Families with Related Children Under 5 Years	14.3%	17.2%	25.5%
All People under 18 Years	12.6%	15.0%	24.9%

Source: American Community Survey 2007, Census 2000, Census 1990

NEW HAMPSHIRE FAMILIES LIVING BELOW 100% OF POVERTY			
	1990 U.S. CENSUS	2000 U.S. CENSUS	2007 AMERICAN COMMUNITY SURVEY
Families with Related Children Under 18 Years	3.2%	6.5%	7.5%
Families with Related Children Under 5 Years	1.8%	8.9%	7.9%
All People under 18 Years	1.8%	7.3%	8.8%

Source: American Community Survey 2007, Census 2000, Census 1990

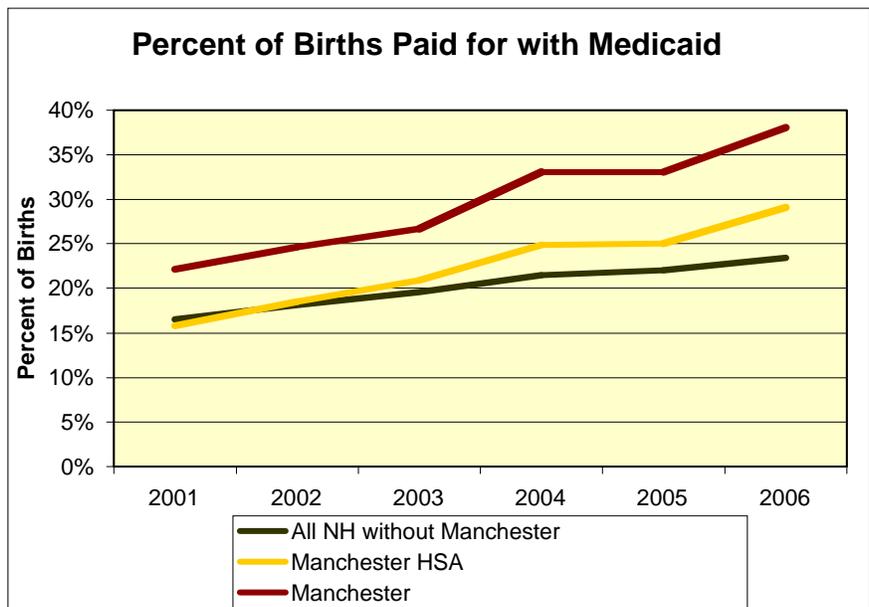
FAMILIES LIVING BELOW 100% OF POVERTY IN THE HEALTH SERVICE AREA, 1999								
	BEDFORD	GOFFSTOWN	MANCHESTER	NEW BOSTON	HOOKSETT	AUBURN	CANDIA	DEERFIELD
Families with Related Children Under 18 Years	1.8%	3.7%	12.3%	4.3%	4.6%	0.7%	1.6%	1.0%
Families with Related Children Under 5 Years	0.0%	4.9%	17.2%	2.7%	4.5%	1.5%	1.9%	0.0%
All People under 18 Years	1.9%	3.3%	15.0%	5.7%	6.0%	70.0%	2.3%	1.0%

Source: Census 2000

PUBLIC ASSISTANCE PROGRAM IN SUPPORT OF CHILDREN AND FAMILIES

Federally-funded health and social service programs have been established to address the health, educational and nutritional needs of low income young children. For pregnant women and children Medicaid is a needs-based health insurance program. Head Start is a successful, national school readiness program which has operated since 1965. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides federal grants to states for supplemental foods, health care referrals and nutrition education.

Women who are eligible for Medicaid insurance during their pregnancy and delivery must have incomes below 185% of Federal Poverty guidelines. Thus, the number of Medicaid funded births provides a partial estimate of the number of children born into poverty. The graph indicates that the percentage of births paid for by Medicaid in Manchester has exceeded those in the HSA and the rest of New Hampshire since 2001. As of 2006, close to 40% of the births in Manchester City, 29% in the HSA, and 23% in the state were paid for by Medicaid.¹⁵



Source: NH DHHS

Head Start is a successful, national school readiness program which has operated since 1965. The Head Start Program in the City of Manchester has three centers in the area, with approximately 156 children enrolled at any one time during the year. As of April 2009, approximately 63 children were on the waiting list.²⁹

From 2006 to 2008, there were 5,415 Manchester children (unduplicated count) ages six months to four years enrolled in WIC. Across the state, anemia has been reported as a major issue for children enrolled in the WIC program. Almost 23 % of all Manchester WIC enrolled children age six months to four years were anemic compared to about 11% of WIC enrolled children statewide. Thirty-one percent of black WIC enrollees and 16% of Hispanic enrollees in New Hampshire were anemic. The state WIC program attributes these numbers to slow introduction of solid foods, low protein and longer reliance on milk.³⁰ Children who participate in the WIC Program have better linkages to the health care system and are more likely to receive both preventative and curative care than children who were not enrolled in WIC.³¹



FOCUS GROUP PARTICIPANTS WEIGH IN: HEALTHY START—BIRTH TO SIX

Several of the focus groups conducted included participants who were caregivers of young children, newborns or pregnant mothers. Many of these participants described barriers to obtaining health care for themselves and their children. Issues discussed included the high cost of health insurance; long waits for some health care providers; inability to access appointments to health care providers on weekends, evenings or early mornings; and inability to access to oral health care.

“When I was pregnant with my second child, Planned Parenthood gave me a list of providers to call. Out of seven doctors, only two had space for Medicaid patients. I did not get my doctor until I was close to three months pregnant. Things that happened in the first months of pregnancy really make a difference in the pregnancy. I had morning sickness and felt tired and wished I had the comfort of a doctor. I feel I would have had an easier time getting a doctor if I had private insurance.”

KEY ISSUES REPORTED BY PARTICIPANTS:

- Although they were able to schedule medical appointments easily, the appointments were months away.
- The high turnover rates among primary care practices created barriers to building a relationship with a provider.
- The quality of the prenatal care received was excellent, but for those without insurance it was more difficult to access the care needed.
- Coordinating care and financial services and billing issues between providers and insurance companies is very difficult.
- It has been difficult to secure appropriate equipment necessary to care for a child who is diagnosed with a severe chronic disease.

DATA SNAPSHOT: HEALTHY START—BIRTH TO SIX

HEALTHY START (0-6 YEARS) INDICATORS				
	MANCHESTER	MANCHESTER HSA	NH WITHOUT MANCHESTER	HP 2010
Family and Social				
Percent of births to mothers who are unmarried, 2006, NH DHHS Birth Data	41.7%* (n=673)	33.5%* (n=775)	27.7% (n=3,510)	na
Percent of births to mothers who used tobacco during pregnancy, 2006, NH DHHS Birth Data	19.7% (n=317)	16.1% (n=373)	17.5% (n=2,218)	1.0%
Number of child care slots, 2009, Easter Seals, NH Bureau of Child Care Licensing	4,562	na	44,120	na
Percent of children ages 0-5 years from whom parents report difficulty finding adequate child care	developmental			
Ratio of founded cases of child maltreatment to total assessed cases, 2008, Division of Children, Youth, and Families, NH DHHS	61:932	na	missing	na
Domestic violence before or during pregnancy	developmental			
Percent of children ages 0-5 whose parents say it is very or somewhat easy to find someone to talk to when they need advice about raising their child	developmental			
Economic Circumstances				
Percent children under 5 years who in the past 12 months live below the poverty level, 2007, American Community Survey	25.1%*	na	10.4%	na
Percent of mothers who use Medicaid to pay for birth, 2006, NH DHHS Birth Data	38%* (n=613)	29%* (n=677)	23% (n=2,968)	na
Head Start enrollment, 2007-2008, Southern NH Services, Head Start-State Collaboration Office	156	na	1,961 all NH	na
Average number of WIC participants per month in 2008, NH DHHS	4,014	na	17,906 all NH	na
Education				
Percent of births to mothers with a high school diploma or less, 2006, NHDHHS Birth Data	48.6%* (n=784)	40.3%* (n=931)	30.8% (n=3,912)	na
Percent of children under age 6 who are read to daily by a parent or family member	developmental			
Physical Environment				
Number of children under age 6 who were found to have elevated blood lead levels(>10ug/dL), 2008, Manchester Health Dept, NH DHHS	49	na	91	na
Percent of housing built before 1950, 2000, Census	43.8%*	na	28.8% all NH	na
Percent of children age 0-4 visiting emergency departments for injuries, 2005, NH DHHS Hospitalization Data	12.5% (n=846)	11.05% (n=1207)	12.7% (n=8505)	na
Hours per week of television exposure	developmental			
Behavior				
Proportions of children over two who consume at least two servings of fruit daily	developmental			75%
Proportions of children over two who consume at least three servings of vegetables daily, with at least one-third being dark green or orange vegetables	developmental			50%
Nutritional intake during pregnancy	developmental			

HEALTHY START (0-6 YEARS) INDICATORS				
	MANCHESTER	MANCHESTER HSA	NH WITHOUT MANCHESTER	HP 2010
Health				
Life expectancy at birth	developmental			
Rate of birth defects	developmental			
Percent of first grade students screened whose BMI was greater than or equal to the 95th percentile, considered obese, 2008-2009 SY, Manchester Health Dept	13.40%	na	na	na
Percent of all births that are low birth weight or very low birth weight, 2006, NHDHHS Birth Data	8.3% (n=134)	7.4% (n=171)	6.6% (n=832)	5.0 for lbw, 0.9 for vlbw
Top 5 leading causes of death children 0-4 yrs old, 2001-2006, NH DHHS Death Data	Perinatal conditions; Congenital malformations, deformations and chromosomal abnormality; Accidents; Cerebrovascular diseases; Malignant neoplasms			na
Access				
Percent of births to mothers who obtained late or no prenatal care, 2006, NHDHHS Birth Data	3% (n=42)	2% (n=52)	1% (n=170)	10%
Proportion of 2-yr-old children who have received all age-appropriate vaccines, as recommended by the Advisory Committee on Immunization Practices (4DTaP, 3 polio, 1 MMR, 3 Hib, 3 hep B, 1 varicella), 2006-2007, Manchester Health Dept	80%	na	88.7% all NH	90%
Rate of hospitalization for acute Ambulatory Care Sensitive Conditions per 1,000 0-4 yr old children, 2006, NH DHHS Hospitalization Data	16.2 * (n=110)	13.8 (n=151)	7.1 (n=478)	na
Percent of children under age 6 with confirmed elevated blood lead (>10mcg/dL) per children screened for lead poisoning, 2008, Manchester Health Dept	1.9%	na	0.9% all NH	na
Participation in Early Periodic Screening, Diagnosis, and Treatment (EPSDT) as percent of children eligible	developmental			
Percent of children under age seven who have undergone a psychosocial behavior assessment	developmental			
Percent of children under age seven who have a primary care provider	developmental			
Percent of children under age seven who have a dental home	developmental			
* Significantly different from the rest of New Hampshire excluding Manchester				