2007 Wake County Child Health Report Card

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The *2007 Wake County Child Health Report Card* was compiled by Action for Children North Carolina

JOHN REX ENDOWMENT

Mission

The John Rex Endowment invests in the development and support of activities, programs and organizations that improve the health of underserved people in Wake and surrounding counties. Currently, the Endowment supports visible and measurable improvements in the health of children and youth by improving access to health services, by promoting healthy behaviors and by providing opportunities for growth and development.

Origins

In his will in 1838, Raleigh businessman John Rex arranged for the establishment of a hospital to care for the sick and afflicted poor of Raleigh. Given the success he had enjoyed in life, he expressed the opinion that he should use his estate in a manner to “most extensively promote the welfare of others.” In 1894, Rex Hospital began serving patients and has done so continuously since that time.

In April 2000, the University of North Carolina Health Care System acquired control of Rex Hospital. Funds from that transaction were placed in the John Rex Endowment, a nonprofit organization independent of the hospital. Those funds are to be used to further the original vision of John Rex by advancing the health and well-being of the residents of the area. Income from the $75 million Endowment supports indigent care and enhances community health care programs.

At the request of, and with support from, the John Rex Endowment, Action for Children North Carolina is pleased to provide the following "picture" of the health of children in Wake County.

Fifteen key health indicators are presented for consideration. Any such presentation is constrained by the availability of data. For most indicators, comparative data for Wake County and the state are presented for the most recent year available, as well as for a comparable base year to indicate progress. For some indicators, comparative data are not available, but the indicators are deemed too important not to include. Better data are needed to enhance decision-making regarding the expenditure of scarce resources.

While virtually all the indicators are interrelated, they are presented in the three "portfolios" adopted by the Rex Endowment: Access to Care; Physical Health; and Social, Emotional, Behavioral Health. Hopefully, this will not only facilitate review, but also the consideration of cross-cutting interventions relevant to the indicators in each group.

For each indicator, the rationale for its inclusion is provided, along with an analysis of "how we are doing." Also included are "opportunities to consider." These are meant to be suggestive, not prescriptive. Wake County's political, business, public service and advocacy communities are in the best position to determine the county's future. Hopefully, the following information will be helpful in formulating the best possible local decisions in the area of children's health.

For almost all the indicators, Wake County is faring better than the state. This is a function not only of the economic health in Wake County, but also of the commitment of its leaders to invest in children. A major part of this investment is in the form of dedicated public staff, who are joined by a committed private provider community to enhance the health and well-being of Wake County's children.

That said, more progress needs to be made. We are pleased that the John Rex Endowment is a leader of the process in achieving that progress.

Demographics

Indicator	North Carolina		Wake County	
	2005	**2000**	**2005**	**2000**
Total Population	8,682,006	8,078,274	755,034	634,466
Child Population (age 0-17)	2,141,041	1,974,560	192,984	159,676
White, non-Hispanic	61.4%	63.6%	61.8%	66.2%
Black, non-Hispanic	26.0%	27.0%	23.7%	23.5%
Hispanic	9.1%	6.2%	9.6%	6.1%
American Indian/Alaskan Native, non-Hispanic	1.4%	1.5%	0.3%	0.4%
Asian/Pacific Islander, non-Hispanic	2.1%	1.8%	4.5%	3.8%
	2004	**1999**	**2004**	**1999**
% of Children in Poverty[1]	18.7	17.3	11.2	10.5

Since 1983, Action for Children North Carolina has been a statewide leader in studying issues, making recommendations and advocating to make North Carolina a better place to be a child and to raise a child.

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1. In 2007, the federal poverty limit for a family of four is $20,650.

Access to Care

It is generally agreed that three criteria need to be addressed to improve access to health care: financial barriers need to be decreased, provider availability needs to be increased and an appreciation of the benefits of care (and preventive care, in particular) in the target group needs to be enhanced. Enhanced access is obviously correlated with enhanced health outcomes.

Issues of access require continued attention. While overall progress has been made in Wake County, it is clear that progress could erode fairly quickly. It may now be time to focus on subgroups—both demographically and geographically—to determine both the gaps in access and the methodologies that might enhance access within subgroups.

Health Insurance for Children

Why does it matter? Access to health insurance greatly reduces financial barriers to care. Studies indicate that children with insurance make better use of preventive care, have fewer and shorter hospital stays, miss fewer days of school due to illness, etc. Access to high-quality, affordable insurance is a critical component in assuring children's health.

How are we doing? There is good news and bad news. The good news is that North Carolina continues to make great strides in enrolling children in public insurance programs. Wake County's progress, bolstered by funding for outreach from the Rex Endowment, has been even better than the state's. The bad news is, the percent of uninsured children both in the state and in Wake County has begun to increase, largely due to continued declines in employer-based coverage.

Opportunities to consider. A two-pronged strategy may be in order. On the one hand, now that Wake County has made progress in enrolling children, it may be time to focus on particular target groups—both demographic and geographic—to enhance access to the public insurance programs. Data from current outreach efforts, such as the Children's Access Program funded by the Rex Endowment, should be helpful in this regard. On the other hand, it has become increasingly clear that the current insurance system is "broken," and reform is in order. Wake County leaders, including the Rex Endowment, should consider playing strong roles in advocating for the needed reforms. This advocacy might take the form of contacts with state and federal administrators and legislators to expand children's access to health insurance, or joining coalitions of like-intentioned groups in this regard.

Health Indicator		Current Year	Benchmark Year	% Change
Insurance Coverage		**2005**	**2000**	
% of Children (age 0-17) Without Health Insurance	**Wake**	8.6%	7.2%	18.9%
	State	11.3%	9.3%	21.5%
		2006	**2000**	
Number of Children (age 0-18) Covered by Public Health Insurance (Medicaid or Health Choice)	**Wake**	51, 369	32,124	59.9%
	State	864,541	629,661	37.3%

Preventive Care Under Medicaid

Why does it matter? The benefits of continuous preventive care are indisputable. It is critical that children enrolled in Medicaid participate in such care, both because their health is generally poorer and because the lack of preventive care leads to more serious episodes of illness. This not only compromises children's health, but also increases the costs of care to state and county budgets.

How are we doing? With the implementation of the "Health Check" outreach initiative and the introduction of the Community Care of North Carolina system for creating medical homes for children, both the state and Wake County have made remarkable progress in this area. In recent years, Wake County has outperformed the state.

Opportunities to consider. Rex Endowment-funded projects have contributed to Wake County's progress in this area. As the percentage of those utilizing preventive care increases, it is likely that the remaining children/families will be harder to reach with the message of preventive care. It may now be time to focus on particular target groups—demographic and/or geographic—to determine if there are disparities and what strategies might be employed to enhance participation by these groups. This will be relevant for children enrolled in Health Choice, as Community Care of North Carolina begins to cover this group as well.

Health Indicator		Current Year	Benchmark Year	% Change
Preventive Care		**2005**	**2000**	
% of Medicaid-Enrolled Children (age 0-18) Receiving Preventive Care	**Wake**	76.3%	59.6%	28.0%
	State	73.5%	66.8%	10.0%

Physical Health

The area of "physical health" can be defined very broadly. Likewise, responses to physical health challenges must be equally broad, and quite varied.

Child deaths—and infant deaths, in particular—are often considered indicators of a society's overall health status. Analyses of such deaths can uncover the special stresses that families experience as well as breakdowns in service systems. Such analyses can lead to interventions that can reduce deaths, reduce morbidity and improve the overall health status of children and families.

There is a growing appreciation of environmental influences on children's health. Indicators for asthma and lead poisoning highlight two of the most important concerns in environmental health, and should also serve as a reminder to be on the alert for other environmental exposures.

Underlying challenges to physical health can be systemic and/or cultural. Dental health is an example of a systemic problem that must be addressed. Overweight/obesity presents complex, cultural problems that must be overcome.

Infant Mortality/Low Birthweight

Why does it matter? Infant mortality is one of the worst family tragedies and is often considered an indicator of a society's overall health status. Low birthweight (5 lbs. 8oz. or less) is a serious correlate of infant mortality and is also associated with developmental disability. While early and continuous prenatal care can ameliorate the problem, low birthweight is usually a function of preconception health behaviors. In addition, low birthweight infants usually require an inordinate amount of intensive care, stressing family and health services budgets.

How are we doing? Over the last 15 years, the state's infant mortality rate has improved dramatically. Though progress has slowed in the past few years, the 2006 rate of 8.1 infant deaths per 1,000 live births is the lowest ever recorded. The disparity between white and minority rates remains wide. In Wake County, the infant mortality rate has been consistently lower than the state's, though Wake County's rate has jumped a bit in the past five years. The racial disparity in Wake County has decreased (though the minority rate is still twice the white rate). This indicates that access to and quality of prenatal and newborn care have been enhanced.

Opportunities to consider. A significant remaining challenge is low birthweight, which has increased slightly in the state and in Wake County (though the increase in Wake County is entirely in the white population). This relatively intractable indicator is now receiving considerable attention from many groups, including the N.C. Child Fatality Task Force and the March of Dimes. These groups have been hosting meetings to develop recommendations for improvement in this area. The Rex Endowment may wish to track these recommendations to determine the role the Endowment might play in implementing those that seem to have the most promise for Wake County.

Health Indicator		Current Year	Benchmark Year	% Change
Infant Mortality		**2006**	**2001**	
Infant Mortality Rate (per 1,000 births)	**Wake**	7.0	6.2	12.9%
	State	8.1	8.5	-4.7%
White Infant Mortality Rate (per 1,000 births)	**Wake**	5.3	3.7	43.2%
	State	6.0	6.1	-1.6%
All Other Races Infant Mortality Rate (per 1,000 births)	**Wake**	11.4	13.0	-12.3%
	State	13.6	14.8	-8.1%

Health Indicator		Current Year	Benchmark Year	% Change
Low Birthweight Infants (weighing 5 lbs., 8 ozs. or less)		**2005**	**2000**	
% of Total Low Birthweight	**Wake**	8.2%	8.0%	2.5%
	State	9.2%	8.8%	4.5%
% of White Low Birthweight	**Wake**	6.7%	6.3%	6.3%
	State	7.6%	7.1%	7.0%
% of All Other Races Low Birthweight	**Wake**	12.3%	12.6%	-2.4%
	State	13.7%	13.0%	5.4%

Child Death Rate/Deaths Due to Injury

Why does it matter? As noted, the death of a child is perhaps the worst of family tragedies. Injury is the primary cause of death in children after the infant year. Deaths are all the more tragic because the great majority of them could be prevented by the attentiveness of parents/caretakers and the taking of reasonable safety measures.

How are we doing? North Carolina has enjoyed a substantial decrease in the overall child death rate (deaths per 100,000 children birth through age 17). Led by declines in infant deaths, the overall death rate dropped by 17 percent in the past decade and a remarkable 31 percent since 1991. There are many caveats to determining rates based on relatively small numbers, even for a county the size of Wake County. Nevertheless, it is instructive to note that Wake County's rate has been consistently lower than the state's.

When reviewed by cause of death, even grouping the totals over five years produces small numbers. Keeping in mind the caveats of small numbers, Wake County experienced a decline in most of the major categories of deaths due to injury.

Opportunities to consider. Once again due to small numbers, the data themselves do not suggest specific interventions. However, Wake County has an active Local Child Fatality Prevention Team, which reviews Wake County's child deaths and develops recommendations for preventing future deaths. This Team would be a good source for recommendations.

Health Indicator		Current Year	Benchmark Year	% Change
Child Fatality		**2006**	**2001**	
Child Fatality Rate (per 100,000; age 0-17)	**Wake**	54.6	62.2	-12.2%
	State	73.2	76.2	-3.9%

Health Indicator		Current Year	Benchmark Year	% Change
Deaths Due to Injury		**2002-2006**	**1997-2001**	
Number of Motor Vehicle-Related Deaths (age 0-17)	**Wake**	45	46	-
	State	844	901	-
Number of Drowning Deaths (age 0-17)	**Wake**	4	9	-
	State	108	149	-
Number of Fire/Burn Deaths (age 0-17)	**Wake**	1	3	-
	State	88	72	-
Number of Bicycle Deaths (age 0-17)	**Wake**	0	2	-
	State	35	49	-
Number of Suicide Deaths (age 0-17)	**Wake**	7	11	-
	State	112	161	-
Number of Homicide Deaths (age 0-17)	**Wake**	11	10	-
	State	283	264	-

Asthma

Why does it matter? Asthma in its mild and serious forms limits the daily activities of children and compromises both health and function. It is the leading health cause of school absences. The prevalence of asthma appears to be growing in North Carolina and nationally, a growth largely attributed to the continued deterioration of air quality.

How are we doing? Various surveys have confirmed that asthma is the leading chronic illness among children. The most recent N.C. Child Health Assessment and Monitoring Program (CHAMP) survey conducted by the State Center for Health Statistics indicated a statewide prevalence of 17 percent. Though county estimates are not available, a statewide school survey conducted in 2000 found that Wake County's prevalence was similar to the state's at that time.

In recognition of the high rate (and expense) of pediatric hospitalizations due to asthma, the N.C. Medical Society Foundation and Community Care of North Carolina initiated a project several years ago to educate primary care providers in the ambulatory care management of asthma. This has led to a substantial decline in the asthma pediatric hospitalization rate. Wake County continues to fare better than the state in this regard.

Opportunities for consideration. There is still a surprising lack of data regarding asthma. The Rex Endowment may wish to provide funds to allow CHAMP to "over-sample" in Wake County to produce county-based prevalence figures. In addition, the Asthma Alliance, a consortium of agencies, has developed a statewide plan to respond to the challenge of asthma. Wake County leaders should be encouraged to review the plan and consider relevant recommendations for implementation in the county.

Health Indicator		Current Year	Benchmark Year	% Change
Asthma		**2006**	**2001**	
% of Children (age 0-17) Diagnosed With Asthma	**Wake**	-	-	-
	State	17.1%	-	-
		2005	**2000**	
Asthma Discharges (rate/100,000 children; age 0-14)	**Wake**	110.7	123.2	-10.1%
	State	164.6	201.3	-18.2%

Lead Poisoning Prevention

Why does it matter? Elevated blood lead levels (defined as 10 mg/dL or higher) are related to overall compromises in learning and development. In North Carolina, it has been associated almost exclusively with exposure to lead paint. However, there are isolated cases in which lead has leeched into water supplies. The recent recalls of toys containing lead provide another reason for caution. It is critical to detect lead exposure in the youngest children, who are more dramatically affected by elevated blood lead levels.

How are we doing? Lead paint has been outlawed in residences built after 1977. This important prohibition, plus statewide awareness campaigns, have led to a dramatic statewide drop in the percentage of children (age 12-36 months) identified with elevated blood lead levels. Wake County has enjoyed these reductions as well and fares better than the state. It should be noted, however, that 43 infants and toddlers in Wake County were identified with elevated levels in 2006.

State protocols recommend that all children should be screened for blood lead levels at 12 and 24 months (when crawling and hand-to-mouth activity commonly increases the possibility of exposure and ingestion), unless it is clear that they live in residences built after 1977. Though progress has been made in the percentage of children screened, the screening percentages for the state and Wake County remain alarmingly low. This is especially problematic given recent exposures via water and toys as noted above.

Opportunities to consider. The issue of low screening rates is particularly worrisome. The N.C. Childhood Lead Poisoning Prevention Program has published a plan with an array of recommendations to eliminate such poisoning in our state. Several recommendations are focused on encouraging primary care providers to screen for blood lead levels in very young children. These recommendations should be given careful consideration by Wake County's public and private primary care providers. In addition, GIS mapping has been completed in Wake County (by the Nicholas School of the Environment and Earth Sciences at Duke University), pinpointing where housing stock is older than 1977. Since this would allow for a more efficient targeting of lead poisoning prevention activities, follow-up of the GIS mapping results should be given serious consideration.

Health Indicator		Current Year	Benchmark Year	% Change
Lead Poisoning Prevention		**2006**	**2001**	
% of Children (age 12-36 months) Screened for Elevated Blood Lead Levels	**Wake**	35.0%	23.2%	50.9%
	State	42.8%	35.1%	21.9%
% of Children (age 12-36 months) With Elevated Blood Lead Levels	**Wake**	0.5%	1.5%	-66.7%
	State	0.8%	1.8%	-55.6%

Dental Health

Why does it matter? Untreated tooth decay can be painful, and for children it can lead to systemic infections that compromise overall health. Dental problems are a common cause of school absence. Statewide, dental health is perhaps the most compelling unaddressed need for children.

How are we doing? Access to dental care is a particular problem for low-income children statewide. Even those on Medicaid, for whom financial barriers theoretically are reduced, have poor access to dental care. While the percentages of Medicaid-enrolled children receiving dental services have increased for all age groups in recent years, the percentages remain distressingly low. (The greatest impediment is the lack of dentists willing to accept Medicaid reimbursement rates. In recent years these rates have been increased dramatically, so more progress should be expected.) Past data for Wake County are unavailable, but current data indicate that children in Wake County are faring at about the state average.

Statewide, 20 percent of children enter kindergarten with untreated tooth decay, which illustrates the lack of access to dental services. Although this is a slight improvement since 2001, dental health remains an unmet need. Wake County was faring slightly better than the state in 2001, but current comparisons cannot be made since Wake County declined to participate in the annual survey conducted by the Oral Health Section of the Division of Public Health.

Opportunities to consider. Increasing the number of providers willing to serve low-income children is critical. Wake County Health Services' Dental Outreach and Access Program (funded by the Rex Endowment) appears to be a significant step in the right direction. The results of this project should be assessed to determine the level and direction of future investments in this area.

Health Indicator		Current Year	Benchmark Year	% Change
Dental Health		**2006**	**2001**	
% of Medicaid-Enrolled Children (age 1-5) Receiving Dental Services	**Wake**	24.6%	-	-
	State	23.8%	20.3%	17.2%
% of Medicaid-Enrolled Children (age 6-14) Receiving Dental Services	**Wake**	46.1%	-	-
	State	47.7%	35.2%	35.5%
% of Medicaid-Enrolled Children (age 15-20) Receiving Dental Services	**Wake**	31.3%	-	-
	State	32.6%	22.3%	46.2%

Overweight/Obesity[2]

Why does it matter? "Overweight" in children is conservatively defined as a body mass index equal to or greater than the 95th percentile using federal guidelines. Being overweight in childhood compromises health and function in children and youth. Even more importantly, it is associated with serious adult health problems, such as high blood pressure, heart disease, diabetes, etc. Eating and physical activity behaviors are established in the formative years. Poor behaviors are hard to change.

How are we doing? Overweight prevalence becomes a public health concern when the percentage exceeds 5 percent of the population group. The North Carolina data for all child age groups are well above that level of concern, and are getting worse. The 2006 data for Wake County are similar to the alarming state levels. While the children represented in these data are those who receive services in local health departments or school health centers and may not be fully representative of the population as a whole, the data are sending an important signal that should be heeded.

Opportunities to consider. "Overweight" is a complex behavioral problem that must be addressed on many fronts. Fortunately, this problem is now the focus of considerable attention at the federal, state and community levels. The N.C. Department of Health and Human Services has embarked on a multi-faceted "N.C. Healthy Weight Initiative." The Health and Wellness Fund has established a study and grant program to ameliorate the problem. Wake County schools have received a federal grant in this area. The General Assembly has also acted, requiring more time for physical activity in schools while restricting access to "junk foods." Many counties, including Wake County, have held summits of key stakeholders to design interventions best suited to their respective circumstances. The Rex Endowment has recently invested in several projects to tackle this complicated, cultural problem in Wake County. Careful monitoring of all the above activities is in order to determine the most efficient and effective future course.

Health Indicator		Current Year	Benchmark Year	% Change
Overweight		**2006**	**2002**	
% of Low-Income Children (age 2-4) Who Are Overweight	**Wake**	16.3%	13.1%	24.4%
	State	15.2%	13.5%	12.6%
% of Low-Income Children (age 5-11) Who Are Overweight	**Wake**	24.0%	19.9%	20.6%
	State	25.2%	21.1%	19.4%
% of Low-Income Children (age 12-18) Who Are Overweight	**Wake**	23.6%	23.5%	0.4%
	State	29.5%	26.3%	12.2%

2. The Centers for Disease Control and Prevention do not apply the label "obese" to children. Although adults whose body mass index is equal to or greater than the 95th percentile are labeled "obese," children in the same category are labeled "overweight."

Social, Emotional, Behavioral Health

Though a standard area of the health care continuum, "social, emotional, behavioral health" remains an amorphous area defying easy categorization. Within this area, there are at least three general categories: clinical behavioral (mental) and developmental conditions; social conditions that impact health status; and risk-taking behaviors that impact health status. There are two threads running through this area.

1. When compared to physical health (for example), there are relatively few measures available on the social, emotional, behavioral issues affecting children. When data (usually from surveys) are available, rarely are there county data comparable to statewide estimates. Thus, the ability to establish indicators and track progress in social, emotional, behavioral health is quite compromised.

2. The indicators are usually a reflection of very complex and deeply cultural issues that preclude simple, straightforward solutions and interventions. There are no "silver bullets" for improving social, emotional, behavioral health.

Despite these hurdles, this area of concentration represents an enormous amount of morbidity that requires responses characterized by creativity and perseverance.

Early Intervention

Why does it matter? The earliest possible diagnosis and intervention services for developmental concerns can minimize later developmental delays and disabilities. Thus, children develop and learn more readily, and need to partake of fewer specialized services, which are costly to both the county and the state.

How are we doing? Perhaps the most effective program in this area is the Early Intervention Program, a state-federal partnership offering screening, diagnosis and intervention services for children from birth through age 2. North Carolina is noted for having one of the best such service systems nationally, serving more than 14,500 infants/toddlers in 2005-2006. Nevertheless, due largely to funding constraints, this statewide caseload represents only about 67 percent of the children estimated to be in need of such services. Similarly, while Wake County's caseload has increased exponentially in recent years, estimates indicate that just more than half of the potential need is being met.

Opportunities to consider. This service program has been redesigned, and efficiencies have led to increased capacity. In addition, an outcomes measurement system will soon produce data that may indicate additional efficiencies. Wake County's leaders should participate in the careful review of these new data. It is also important that other providers—medical providers, child care providers, etc.—become more involved in the system to identify and respond to developmental morbidity. Rex Endowment-funded projects, such as the Early Childhood Development Program and the Children's Health and Development Program, have taken big steps in this direction. The challenge remains great.

Health Indicator		Current Year	Benchmark Year	% Change
Early Intervention		**2005-2006**	**2002-2003**	
Number of Children (age 0-3) Enrolled in Early Intervention Services to Reduce Effects of Developmental Delay, Emotional Disturbance and/or Chronic Illness	**Wake**	1,255	593	111.6%
	State	14,521	10,504	38.2%

Teen (Age 15-17) Pregnancy

Why does it matter? Teen pregnancy is an indicator of the risk-taking behaviors of our youth. Pregnancy at these ages compromises young women's health, and more frequently compromises their potential to further their education. Moreover, higher rates of low birthweight and infant mortality are associated with teen pregnancies.

How are we doing? In the past decade, there has been a remarkable national decline in teen pregnancies, and this has been experienced in North Carolina and Wake County as well. Researchers indicate that this is a combination of delayed sexual activity and better access to and use of contraceptive methods. There is still a wide disparity between white and minority rates. Wake County's progress in this area has been consistently better than the state's, though the racial disparity gap remains wide.

Opportunities to consider. Though progress has been made, teen pregnancy remains an important concern. Teen pregnancy is a complex problem that requires a multi-faceted approach. Wake County's public and private agencies have made heavy investments of time, effort and resources in wrestling with this problem, and these overall collaborative efforts are an underlying basis for the progress that has been made. Based on past success, additional opportunities for success might best be identified by agencies and coalitions working in this area (Wake County Human Services, Teen Health, Wake County Schools, etc.). Perhaps a "summit" of these agencies should be explored.

Health Indicator		Current Year	Benchmark Year	% Change
Teen Pregnancy		**2005**	**2000**	
Teen Pregnancy (per 1,000; age 15-17)	**Wake**	23.2	31.9	-27.3%
	State	35.6	44.4	-19.8%
White Teen Pregnancy Rate (per 1,000; age 15-17)	**Wake**	16.7	22.3	-25.1%
	State	27.5	35.5	-22.5%
All Other Races Teen Pregnancy Rate (per 1,000; age 15-17)	**Wake**	33.7	54.7	-38.4%
	State	50.9	62.8	-18.9%

Alcohol, Tobacco and Substance Abuse

Why does it matter? These risk-taking behaviors in the teen years not only compromise the health of our youth, but also their potential for education. Studies also link poorer adult health and more frequent contacts with the juvenile and criminal justice systems for youth who frequently use these "gateway" substances.

How are we doing? The "Healthful Living" portion of the school curriculum provides information on the dangers of these substances and encourages abstinence. This is reinforced by public awareness campaigns. A major problem is that progress in this area cannot be tracked at the county level. The "Youth Risk Behavior Survey" (YRBS) and "N.C. Youth Tobacco Survey" (of students in grades 9-12), conducted every two years, provide statewide data. The surveys show mixed results in overall state estimates, with usage still alarmingly high (20 percent for cigarettes; 21 percent for marijuana; 42 percent for alcohol/beer). Since the surveys rely on self-reporting, there are some questions regarding the validity of the results. However, the surveys are the best tools available.

Opportunities to consider. Though additional, specific interventions are needed in this area, it is critical that evaluation methodologies be established to measure the effectiveness of those interventions. A major problem with the YRBS and N.C. Youth Tobacco surveys is that sample sizes are not large enough to provide county-based estimates. Some counties, such as Durham County, have invested resources to fully sample their county to provide reliable county-level estimates. This might be a wise investment for the Rex Endowment to consider for Wake County.

A more general prevention-based approach might also be explored. A number of different groups have done work in this area. For example, the Search Institute of Minneapolis, through its Healthy Communities–Healthy Youth Initiative, has developed an approach that encourages parents and community organizations to join together "in nurturing competent, caring, and responsible children and adolescents," based upon instilling positive developmental assets. The Endowment might wish to explore the implementation of such an approach in Wake County.

Health Indicator		Current Year	Benchmark Year	% Change
Alcohol, Tobacco and Substance Abuse: % of Students (grades 9-12) Who Reported Using the Following in the Past 30 Days		**2005**	**2001**	
Cigarettes	**Wake**	-	-	
	State	20.3%	27.8%	-27.0%
Marijuana	**Wake**	-	-	
	State	21.4%	20.8%	2.9%
Alcohol (including beer)	**Wake**	-	-	
	State	42.3%	38.2%	10.7%

Mental Health

Why does it matter? In its broadest sense, this indicator includes emotional disorders, developmental disabilities and substance abuse. National research studies indicate that 8-15 percent of our children have challenges in the area of mental health, (though there is considerable debate as to the actual percentage). Obviously, left untreated, mental health problems can lead to monumental health and functional problems, both for the individuals affected, and for society as whole.

How are we doing? At this point, there is no clear consensus on outcome measures (i.e., health status measures) for child mental health as a whole. Though some systems are in place for providers to measure individual patients' progress, these do not provide an overall picture of mental health in a community. Since services are typically underfunded and sometimes entirely unavailable, waiting lists often are the measure for "how we are doing?"

Opportunities to consider. Since the public and private response to mental health problems has been considered woefully inadequate, a statewide "mental health reform" initiative is underway. At this point, new guidelines for child mental health services are being revised, and there is considerable consternation among providers and the public regarding the efficacy of current proposals. Thus, though this is a critically important area, it is difficult to suggest a specific opportunity beyond a reminder to stay engaged in the statewide process and then in the implementation of the revised guidelines in Wake County. Specific opportunities may emerge from that process.

Child Abuse and Neglect

Why does it matter? This is one of the greater tragedies of our culture. Child maltreatment results not only in immediate physical and emotional harm, but also has long-lasting effects on development, overall child and adult health and even increased contacts with the juvenile and criminal justice systems. All of this is quite costly in both human and fiscal terms.

How are we doing? Over the last few years, the Multiple Response System has been introduced statewide with the aim of making the investigation of reports of abuse/neglect as well as the substantiation decision-making process more uniform statewide. These changes preclude trend analysis at this time. However, the statewide data for 2006 indicate that our families need a lot more help, with almost 20,000 substantiations of abuse/neglect and 12,000 additional families found to be in need of support services. Interestingly, while Wake County's investigation rate is well below the state rate (25 per 1,000 vs. 55 per 1,000), the combined percentages of substantiations/services needed slightly exceeds the state rate.

Opportunities to consider. Reviewing the implementation results of the Multiple Response System in Wake County is warranted. This may provide guidance for the future involvement of the Rex Endowment in the overall challenge of child maltreatment. Additional guidance may come from a 2006 report from a Task Force on the Prevention of Child Maltreatment sponsored by the N.C. Institute of Medicine. This report includes an array of recommendations. After consideration, the Endowment may be of assistance in implementing relevant recommendations within Wake County.

Health Indicator		Current Year	Benchmark Year	% Change
Child Maltreatment		**2006**	**2001**	
Number of Children (age 0-17) Receiving Assessments for Abuse and Neglect	**Wake**	4,992	3,329	-
	State	119,052	107,038	-
% of Children (age 0-17) Receiving Assessments Who Are Substantiated as Victims of Abuse and Neglect	**Wake**	12.0%	-	-
	State	16.6%	-	-
% of Children (age 0-17) and Their Families Receiving Assessments Who Are Found Services Needed	**Wake**	17.6%	-	-
	State	10.1%	-	-
Confirmed Deaths Due to Child Abuse (age 0-17)	**Wake**	1	0	-
	State	34	22	-

Data Sources

Demographics

Demographics: National Center for Health Statistics, "Bridged-race Vintage 2005 postcensal population estimates for July 1, 2000 - July 1, 2005, by year, county, single-year of age, bridged-race, Hispanic origin, and sex," accessed online at: http://www.cdc.gov/nchs/about/major/dvs/popbridge/datadoc.htm, in May 2007.
Poverty: Small Area Income and Poverty Estimates (SAIPE). "Estimates for North Carolina Counties, age 0-17 in poverty." Available online at: http://www.census.gov/hhes/www/saipe/.

Access to Care

Children Without Health Insurance: Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill. County-level Estimates of the Number of Uninsured in North Carolina. Available online at: http://www.shepscenter.unc.edu/index.html.
Public Health Insurance: Special data request to the Division of Medical Assistance, N.C. DHHS, August 2007.
Medicaid-Enrolled Preventive Care: Calculated using data from the N.C. Division of Medical Assistance, N.C. DHHS, "Health Check Participation Data." Available online at http://www.dhhs.state.nc.us/dma/healthcheck.htm.

Physical Health

Infant Mortality: State Center for Health Statistics, N.C. DHHS. "North Carolina Infant Mortality Report." Available online at: http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm.
Low Birthweight Infants: State Center for Health Statistics, N.C. DHHS. "Selected Vital Statistics" Report. Available online at: http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm.
Child Fatality and Deaths Due to Injury: Women's and Children's Health Section, Division of Public Health, N.C. DHHS, and the State Center for Health Statistics. "Child Deaths in North Carolina." Available online at: http://www.schs.state.nc.us/SCHS/data/vitalstats.cfm.
Asthma Diagnosed: State Center for Health Statistics, N.C. DHHS Child Health Assessment and Monitoring Program. Available online at: http://www.schs.state.nc.us/SCHS/champ/.
Asthma Discharges: State Center for Health Statistics, N.C. DHHS. County Health Data Book. Available online at: http://www.schs.state.nc.us/SCHS/data/databook/.
Lead Poisoning Prevention: Special data request to the N.C. Childhood Lead Poinsoning Prevention Program, Department of Environment and Natural Resources, August 2007.
Dental Health: Special data request to the Oral Health Section, Division of Public Health, and the Division of Medical Assistance, N.C. DHHS, August 2007.
Overweight: 2005 NC-NPass Data. "Proportion of Overweight (BMI >=95th Percentile) Children by Age, Race, and Gender, NC-NPASS." Available online at: http://www.eatsmartmovemorenc.com/data/index.html.

Social, Emotional, Behavioral Health

Early Intervention: Special data request to the Division of Women and Children's Health, N.C. DHHS, August 2007.
Teen Pregnancy: N.C. DHHS, State Center for Health Statistics. "North Carolina Reported Pregnancies." Available online at: http://www.schs.state.nc.us/SCHS/data/county.cfm.
Tobacco Use: N.C. Tobacco Prevention and Control Branch, N.C. DHHS. N.C. Youth Tobacco Survey. Available online at: http://www.communityhealth.dhhs.state.nc.us/tobacco.htm.
Alcohol and Substance Abuse: 2005 Youth Risk Behavior survey, North Carolina High School Survey, detailed tables. Available online at: http://www.nchealthyschools.org/data/.
Child Maltreatment: Duncan, D.F., Kum, H.C., Flair, K.A., Stewart, C.J., Weigensberg, E.C. (2007). N.C. Child Welfare Program. Retrieved 9/27/07, from University of North Carolina at Chapel Hill Jordan Institute for Families website. Available online at: http://ssw.unc.edu/cw/.
Child Abuse Homicides: Information was obtained from the N.C. Child Fatality Prevention Team (Office of the Chief Medical Examiner) for this report. However, the analysis, conclusions, opinions and statements expressed by the author and the agency that funded this report are not necessarily those of the CFPT or OCME.

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