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Executive Summary

The health of children and youth is profoundly influenced by the physical, geographic, economic, social and emotional context in which they are growing up. This year’s report focuses on the health status of children and youth in Michigan, using a selected set of objectives from the national Healthy People (HP) 2010 developed by scientists and public health experts. Since Michigan mirrors national averages closely on almost all the key KIDS COUNT indicators, the national HP 2010 objectives provide reasonable targets for the state to achieve. They also afford an opportunity to assess progress in areas such as tobacco use among adolescents not covered in previous data books.

By 2005 Michigan had already reached the HP 2010 target on three indicators—its rates of immunization for toddlers, teen pregnancy, and physical fighting among high school students although racial disparities need to be addressed for these measures. (The overarching goal of HP 2010 is to eliminate disparities in health outcomes among racial groups.)

Between 2000 and 2005 dramatic improvements occurred in tobacco use and binge drinking among Michigan high school students; both dropped by roughly one-quarter. Substantial progress also occurred in the lowered number of children, ages 1–6, who tested as lead poisoned. The number dropped by almost half—from 4,300 to 2,300, despite the increased testing among low-income children who are at highest risk. The HP target is that no child will be lead poisoned by 2010.

While Michigan experienced improvement between 2000 and 2005 on 14 of the 18 selected indicators, for most (8 of the 14), it was minimal—10 percent or less over the five-year period. On four measures, including the mortality rates for infants and young children, progress was less than 4 percent. In order to reach the HP targets in the next five years, the rate of improvement for ten measures will have to exceed 35 percent.

Due to the striking differences by race, specifically for African Americans, for most measures, rates for African American children and youth would have to improve by even greater margins than whites to reach the HP 2010 target. For example, to reach the HP 2010 target young child death rate, the white rate would have to decline by one-quarter, the African American one would have to drop by almost two-thirds.

The four indicators where child well-being eroded over the trend period included rising rates of abused or neglected children, low-birthweight infants and overweight high school students, a companion problem to the falling rates of youth who participated in vigorous physical activity on a regular basis.

In the final analysis, health is an economic, environmental, and social justice issue, and more stakeholders, such as employer organizations, labor unions, the educational system, the medical establishment, religious institutions, property developers, and elected officials, must be focused on improving the broad context of health outcomes for all children and youth in Michigan.
“The vision of Healthy People in healthy communities involves broad-based prevention efforts and moves beyond what happens in physicians’ offices, clinics, and hospitals—beyond the traditional medical care system—to the neighborhoods, schools, workplaces, and families in which people live their daily lives. These are the environments in which a large portion of prevention occurs.”

Introduction

The health of children and youth is profoundly influenced by the physical, geographic, social and emotional context in which they live. The quality of their housing, the air they breathe, the food available to them, the opportunities for fresh air and exercise, the care and attention of their parents and other caregivers, the schools they attend, the media to which they are exposed, and the resources in their particular family and community all play vital roles. Too often health is seen as a state of wellness which is simply secured by an access to medical care. The reality is that the larger context of children’s lives, such as their socio-economic status and their social support systems, has as much impact on their health status as genetic inheritance from their parents, according to the World Health Organization.

Healthy People 2010 is a set of health objectives for the nation to achieve over the first decade of the new century.

Healthy People 2010 builds on initiatives pursued over the past two decades. The 1979 Surgeon General’s Report, Healthy People, and Healthy People 2000: National Health Promotion and Disease Prevention Objectives both established national health objectives and served as the basis for the development of state and community plans. Like its predecessors, Healthy People 2010 was developed through a broad consultative process, built on the best scientific knowledge and designed to measure programs over time.

This year the Michigan data book focuses on the health status of children and youth in Michigan, using a selected set of objectives from the national Healthy People (HP) 2010. These objectives were developed by scientists and health professionals inside and outside government, including the Centers for Disease Control and Prevention, the National Institutes of Health, the Health Resources and Services Administration of the U.S. Health and Human Services Department, and the Indian Health Service.

HP 2010 identified specific priorities and measurable objectives in an effort to advance the health and well-being of the nation. National averages unfortunately show that the health of U.S. children is worse in virtually all categories, including immunizations and mortality rates, when compared to children in other industrialized countries. Since Michigan mirrors national averages closely on almost all the key KIDS COUNT indicators, the HP 2010 objectives provide reasonable goals to review state progress.

While HP 2010 targeted 467 disease prevention and health promotion objectives across all age groups in multiple focus areas to achieve by the end of the first decade of the new century, this report will examine 18 specific objectives related to children and youth.

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1 Office of Disease Prevention and Health Promotion. Healthy People 2010. (http://www.healthypeople.gov/About/whatis.htm)

2 Other partners include the Healthy People Consortium, which consists of more than 400 national membership organizations, all State and Territorial health departments, and key national associations of State health officials working to advance health, business, and a number of non-governmental agencies and organizations that have signed memos of understanding to promote HP2010.

The two overarching goals of HP 2010 are:

- Increasing the quality and years of life and
- Eliminating disparities in health outcomes.

To that end, the national HP 2010 objectives are not differentiated for racial groups even though in almost all instances, rates for minority populations would require much more dramatic improvements to reach the objective. For example, reaching the HP 2010 infant mortality objective of 4.5 deaths per 1,000 live births would require a substantial 18-percent decline in the next five years in the mortality rate of white infants in Michigan, but a monumental 75-percent decline in that of African American infants. Wherever possible, this report provides data by racial subgroups.

The 18 objectives selected for this report, drawn from the Healthy People 2010 document, were based on the availability of data and their status as a key Kids Count indicator or a critical area of concern, such as tobacco use among adolescents, even though data may be limited or unavailable at the county level.

Often discussions about ways to improve health outcomes maintain that health status results from a series of personal choices. Personal decisions, however, are made within a social context and the constraints of public policies and corporate practices. For example, public policies about recreation, transportation, housing, and urban development create or limit opportunities for physical activity. In the final analysis, health is an economic, environmental, and social justice issue, and more stakeholders, such as employers, labor unions, developers, and elected officials must be involved to improve health outcomes for all children and youth in Michigan.

Only one HP 2010 focus area—Maternal, Infant, and Child Health—is devoted solely to children and youth objectives, and six of the 18 objectives reviewed in this report are from that area. The other objectives discussed in this review are drawn from several other focus areas such as Environmental Health (childhood lead poisoning), Immunization (toddlers), and Family Planning (teen pregnancy). For ease of reference to the original document, the objectives are discussed in the order in which they appear in the HP 2010 focus areas (see insert above).

The 2010 Healthy People goal is to eliminate childhood lead poisoning among children, ages 1–6. Children with 10 or more micrograms of lead for every deciliter of blood are considered poisoned, but a growing body of research suggests significant damage occurs at even lower levels of lead. One recent study found that blood lead levels between 5–9 micrograms per deciliter of blood in early childhood are related to lower educational achievement in early elementary school as measured by end-of-grade testing.

Young children under the age of six are most likely to suffer damage from lead poisoning as these youngsters are undergoing rapid development. The central nervous system is particularly vulnerable to lead; its damaging effects include reduced IQ and behavior problems such as impulsiveness and short attention span.

Michigan ranks sixth in the nation in the number of children identified with lead poisoning. Despite recent concerns about toys tainted by lead, the primary sources of lead-poisoning for children continue to be deteriorating lead paint, and soil and dust in and around housing built before 1970 when lead paint was banned.\(^6\) (Renovations of older homes can also release harmful lead dust and paint chips.) Low-income children living in older housing experience lead-poisoning at a rate 30 times higher that of middle-income children in newer housing, according to national survey data.\(^7\)

Blood tests are key to finding lead-poisoned children. In Michigan each year roughly 97,400 children, ages 1–6, were tested over the three-year period of 2003–2005, and on average 2,550 of them each year had exhibited lead poisoning—elevated blood lead levels at 10 or more micrograms of lead for every deciliter of blood—representing approximately 3 percent of those tested.

In Michigan the percentage of children tested for lead rose dramatically between 1998–2000 and 2003–2005—from 7 percent of children, ages 1–6, to 12 percent. Even more important, the number of Medicaid-enrolled children tested more than doubled.

Early detection and treatment of lead poisoning are critical because of its destructive and irreversible impact. Most lead-burdened children do not exhibit symptoms until damage is severe. Since low-income children, particularly toddlers, are at significantly higher risk of lead poisoning, federal Medicaid guidelines require health providers to test for lead as part of the annual Early and Periodic Screening Diagnostic and Treatment (EPSDT) program. Medicaid-enrolled children are required to be tested at least twice during their first two years—at age one, again at age two, or once between the ages of three and six if they had not been previously tested.

Despite these federal requirements, Medicaid-enrolled children in Michigan have not routinely received lead testing as part of their EPSDT coverage. Michigan Public Act 55 of 2004 sought to remedy this situation by mandating compliance for lead-testing by the managed care providers where most Medicaid-enrolled children receive their care. The law requires that by October 2007 at least 80 percent of Medicaid-enrolled children under age three be tested for lead at least once before their third birthday. Managed care plans not meeting this standard will face financial penalties after the deadline. While this standard is well below the federal mandate, steady progress through a complex set of fiscal incentives has been made in Michigan in testing more toddlers for lead. The percentage of Medicaid-enrolled children under the age of three tested for lead by the managed care providers rose from 41 percent in April 2004 when the law was passed to 69 percent by July 2007.\(^8\)

Active local coalitions have also played a role in improving lead testing rates and advocating for state policies to lower the risk of childhood lead poisoning. The Lead Poisoning Prevention and Control Commission named by the Governor in 2005 issued a report with many recommendations, including the following:

- Educating parents, rental property owners, and residential contractors about appropriate lead hazard abatement practices

\(6\) Michigan Department of Community Health. Childhood Lead Poisoning Prevention Program.


Family Planning
Reduce pregnancies among teens, ages 15–17

In 2000, Michigan’s state pregnancy rate for teens, ages 15–17, was lower than the national Healthy People (HP) 2010 objective. The state pregnancy rate for this age group was 37 pregnancies per 1,000 female teens, significantly below the HP 2010 objective of 43 pregnancies. By 2005 great strides had been made in the state with the result that the Michigan rate had dropped to 30 per 1,000 teens.

Despite these improvements in Michigan’s teen pregnancy rate, pregnancy among young teens remains a serious issue. The experience of pregnancy and potential parenthood at that age has profound economic and social costs that last a lifetime. The Michigan teen pregnancy rate in 2005 reflected roughly 6,400 teens, ages 15–17, whose lives were changed by this experience. While the 2005 number represented roughly 1,000 fewer affected teens than in 2000, the state cannot afford to relax its efforts to protect adolescents from pregnancy as the consequences become progressively more threatening to a reasonable quality of life for the family: they must survive in a world with a highly competitive economy and severely restricted access to programs which could mitigate the economic pressures on the family.

In 2005 almost all the state’s counties had teen pregnancy rates that were more than 20 percent below the HP 2010 target rate. In fact, only four counties—Lake, Calhoun, Jackson, and Wayne—had rates that were higher than the HP 2010 target.

While the overall state rate is below the national goal, the rate for African American teens (60 per 1,000) was substantially above the national goal. Between 2000 and 2005 the pregnancy rate among African American teens fell by only 5 percent. To reach the 2010 goal will require a decline of 26 percent in the next five years.
To address this issue, the state and its communities need to maintain and expand efforts to:

- Examine and address the underlying causes of teen pregnancy;
- Help parents to be effective in their role as sex educators;
- Broaden the scope of pregnancy prevention efforts;
- Provide accurate, clear, and consistent information to teens about how to avoid risky behaviors;
- Create community-wide action plans for teen pregnancy prevention including adolescent reproductive health services; and
- Give young people a vision of a positive future by investing time and resources to help them acquire good decision-making, communication, and work skills that prepare them for the adult world.

Immunization

**Raise levels of immunization for toddlers**

Immunizations shield children from diseases that can cripple or kill them. Protecting children from vaccine-preventable disease requires a sustained, coordinated and comprehensive effort by health-care providers, parents, and communities. The Healthy People (HP) 2010 objective targeted an immunization rate of 80 percent of the nation’s 19 to 35-month-old children for the baseline series of vaccines (4:3:1:3:3). Both Michigan and the nation reached this goal well ahead of schedule: Michigan in 2002 and the nation in 2004. As of December 2006, ten counties in the state still lagged more than 10 percent below the national target although the relatively low rates in the densely populated southeastern counties are affected by relatively low provider participation and reporting to the Michigan Care Improvement Registry.

Michigan currently requires immunization beyond the baseline series established in the HP 2010 objective. The state has added the vaccine for chickenpox (the 4:3:1:3:3:1 series) as a requirement for children entering a child care center, preschool program or kindergarten. Delay in getting infants and toddlers immunized can

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9 These strategies were developed by Dr. Rima Shore for the Annie E. Casey Foundation (July 2003).

10 The 4:3:1:3:3:1 Series includes the following: 4 doses of Diphtheria, Tetanus, and Pertussis (DTaP); 3 or more doses of poliovirus vaccine; 1 or more doses of measles-containing vaccine; 3 or more doses of influenza to prevent meningitis and pneumonia; and 3 doses of hepatitis B. In Michigan, 1 dose of chickenpox (vaccinia) is also required for kindergarten enrollment. All of these vaccinations are scheduled to be completed by age 9 months.

11 The state immunization rate is from the National Immunization Survey (NIS) conducted by the Centers for Disease Control and Prevention. It is considered more reliable than the MCIR state rate, which has not reached full participation and therefore understates the state immunization rate.

12 The immunization rates for toddlers, ages 19 through 35 months old, for Michigan counties, are reported by the Michigan Care Improvement Registry (MCIR).
put them at risk because many of these diseases are most lethal for children under age two.

While several childhood diseases have been completely eliminated in Michigan by extensive immunization, others still pose a danger. In fact, between 2005 and 2006 cases of three vaccine-preventable diseases spiked in Michigan. The 5,200 cases of chicken pox represented an increase of 25 percent. The incidence of whooping cough doubled to 632 cases; and mumps cases tripled—from 24 to 85. Children represented two-thirds of those affected by mumps and whooping cough, and 85 percent of victims of chicken pox. The increased incidence in whooping cough threatens infants who are at the highest risk of developing complications, such as bacterial pneumonia, from the disease.

Protection provided by some childhood vaccines can begin to wear off in the preteen years, and teens can develop risks for more diseases as they get older. Current recommendations suggest that preteens—11 and 12 year olds—be vaccinated against diseases such as meningitis, tetanus, diphtheria, whooping cough, and cervical cancer. Despite the need for continued protection, research shows that preteens often do not get preventive healthcare during this critical developmental stage.

Injury and Violence Prevention
Reduce maltreatment of children

The maltreatment of children, as defined by Michigan’s Child Protection Law, results from abuse or neglect by the person responsible for the child’s health and welfare, such as the parent or legal guardian or, in some cases, a parent’s partner. When abuse or neglect of a child is reported to a county Department of Human Services office, Child Protective Services (CPS) workers review the allegation and, within a set of guidelines, decide whether to initiate an investigation.

Once the investigation is complete, workers assess the evidence to determine whether the preponderance or majority of the evidence confirms that maltreatment occurred. Through a structured decision making process the CPS worker must then determine the risk to the child of further maltreatment and, based on that determination, assign a category to the case. Only cases assigned a “Category 1”—where the child is at
risk of further abuse or neglect—require a court petition for removal or court-ordered services in the home to keep the child safe. Roughly one-third of all confirmed cases rated a Category 1 in 2006. Another third were assigned a Category 2 which requires CPS services for the child to remain in the home. Only in one-third of cases of confirmed child maltreatment cases were children deemed at low-risk of future harm.

In Fiscal Year 2006, a total of 28,840 children in Michigan were found to be confirmed victims of abuse or neglect. Between 2000 and 2006 the rate of child victims in Michigan rose from 10.4 to 11.4 victims per 1,000 children, ages 0–17—an increase of 10 percent. Overall Michigan trends are moving in the wrong direction.

The national Healthy People 2010 objective is to reduce the maltreatment of children to 10.1 victims per 1,000 children. Michigan is a state with a relatively high rate of overrepresentation of African American children in the child welfare system—African American child victims are confirmed as victims of maltreatment at more than double the rate of white children despite consistent findings from National Incidence Surveys (NIS) that maltreatment does not differ significantly by race. Other risk factors, however, such as the higher rates of poverty and single parent families in the African American community, do affect more African American children. The gap closed slightly during this reporting period as the rate of abuse or neglect among African American children dropped four percentage points while the white rate rose by a percentage point.

Poverty escalates the risk of abuse or neglect. Children from families with annual incomes below $15,000 as compared to children from families with annual incomes above $30,000 per year were roughly 22 times more likely to experience some form of maltreatment, according to the NIS. With the 36-percent increase in its child poverty rate between 2000 and 2005, Michigan has more children at risk of maltreatment.

Between 2000 and 2006, the number of child victims due to neglect rose by roughly 3,000 while abuse victims dropped by about the same number. The most pronounced increase in neglect occurred in the number of victims of “failure to protect,” which more than doubled—from 2,571 to 6,510 child victims. (Such failure involves knowingly allowing another person to mistreat or abuse a child.) Child victims of “poor supervision” jumped from 3,416 to 5,197. (In these cases the caretaker placed or failed to remove a child from a situation beyond the child’s level of maturity, physical condition or mental abilities that results or could result in bodily injury.)

Michigan’s capacity to protect children has been seriously diminished by the large erosions in state revenue which have led to cutting prevention programs as well as by the early retirements that eliminated large numbers of experienced CPS staff.

\[\text{Reduce physical fighting among adolescents}\]

Physical fighting is one manifestation of interpersonal violence among adolescents. Adolescents who engage in physical fights are also more likely to practice other risky behaviors, such as smoking, drinking, and using illegal substances, according to research studies. Studies have also found that adolescents who reported having been bullied were more likely to have engaged in fights. Furthermore, youth who have been victims of violence are also more likely to behave violently towards others.

The Healthy People 2010 target is to reduce the percentage of adolescents involved in physical fights during the year to 32 percent. Even in 2001 Michigan’s rate of 34 percent was close to that target and by 2005 it had dropped below the target—to 30 percent, according to the Youth Risk Behavior Survey. The rates among subgroups, however, varied dramatically with males, minorities, ninth, and tenth graders at much higher risk than their counterparts.

\[\text{13 The NIS methodology identifies a much broader range of children than those who come to the attention of any one type of service agency or the even smaller subset who receive child protective and other child welfare services.}\]

When junior and senior high school students around the nation were asked to identify the causes of the most recent fights they had witnessed, the most frequent responses included the following:

- Insults or disrespectful treatment (54%)
- An ongoing feud or disagreement (44%)
- An initial hit, push, shove, or bump (42%)
- Retribution against the alleged source of rumors or gossip (40%)
- Lack of anger control (39%)
- An audience watching or encouraging the fight (34%)

One key strategy to curb physical fights among adolescents is to discourage them from bullying, teasing, or spreading negative gossip about others. Children and youth should be encouraged to respect others and value differences by broadening their social circles. Opportunities for children and youth to learn about ways to resolve arguments and disagreements in conflict resolution workshops can help them avoid resorting to physical fights. Roughly the nine in ten Michigan schools that require a health education course include violence prevention in the curriculum.\(^15\)

Maternal, Infant and Child Health
Reduce infant deaths

Infant mortality rates are often used as a measure of overall child health in a community. By that measure the U.S. compares poorly with other countries. While the U.S. spends more on health care than any other country, its infant mortality rate is higher than 21 other industrialized nations. Even more disturbing, the infant mortality rate in Michigan is higher than that of the nation; its 2004 rate ranked the state 34th among the 50 states, according to the national KIDS COUNT Data Book 2007 (number 1 being the best or lowest rate).

Approximately 1,000 Michigan infants died before their first birthday in 2005. The rate hardly changed between 2000 and 2005—remaining at eight deaths per 1,000 infants.\(^17\) Such lack of progress does not bode well for the state’s capacity to reach the Healthy People (HP) 2010 goal of 4.5 deaths per 1,000 infants.

Even more disturbing is the dramatic disparity in Michigan in the risk of infant death. Michigan’s African American infants were three times more likely to die than their white counterparts—17.9 deaths per 1,000 infants compared to 5.5 among white infants in 2005. Michigan had the third highest infant mortality rate for African American infants in the country in 2004. The disproportionate burden of poverty carried by the infant’s family, the concentration of disadvantages produced by economic segregation in housing and transportation, and the lack of access to health care—all play critical roles in producing the state’s unacceptably high rate of infant deaths.

Research has suggested that traditional gender socialization and social norms encourage males to engage in behaviors that put them at risk.

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Most Michigan counties will have to improve dramatically to achieve the HP 2010 target for infant mortality. Among Michigan’s 54 counties with enough deaths to calculate a rate, only five had rates at or better than the target while most (42) had rates more than 20 percent worse than the target. Some of the most populous counties such as Oakland, Wayne, Kent and Saginaw saw little improvement or actual worsening in the first five years of the decade.

To improve infant mortality rates and address racial disparities, the Infant Mortality Coalition Initiative through the Michigan Department of Community Health has targeted 11 areas in the state with the majority of total births and almost all (93%) the African American births in the state. In 2007, the initiative focused on improving the health and well being of mothers with prior early deliveries or low-birthweight infants during the “interconception” period—the time before their next pregnancy. The rationale is that improving maternal health and well-being after an unhealthy birth increases the likelihood of that mother having a healthy baby, should she become pregnant again.

Reduce child deaths

In the latest national KIDS COUNT report, the death rate among children, ages 1–14 earned Michigan its best ranking—14th among the 50 states, even though the 2004 state rate was not that different from the national average of 20 deaths per 100,000 children ages 1–14. On average, 400 children, ages 1–14, died each year in Michigan over the three-year period of 2003–2005 compared to 471 each year between 1998–2000. Between 2000 and 2005, the Michigan child death rate dropped by 11 percent—from 23 deaths per 100,000 children to 21 deaths.

Healthy People (HP) 2010 sets target death rates for two groups of children—young and early elementary. For young children, ages 1–4, the HP target is 20 deaths per 100,000; for early elementary children, ages 5–9, the target is 13 deaths per 100,000. Young children suffer a much higher risk of death than elementary school-aged children. In Michigan the average death rate for young children was twice as high as that of early elementary-aged children—33 deaths per 100,000 compared to 16 for early elementary children.

Between 2000 and 2005, the death rate for young children in Michigan dropped by only 4 percent. To reach the HP 2010 target of 20 deaths per 100,000 young children would require a substantial (40%) decline in the 2005 Michigan rate over the next five years.

The state death rate for elementary school-aged children is closer to the national HP 2010 objective. The Michigan death rate for this age group is 21 percent higher than the HP 2010 objective of 13 deaths per 100,000 children ages 5–9, with 16 deaths per 100,000. The death rate for white
children in this age group in Michigan (12 deaths per 100,000) had reached the goal in 2005.

Michigan’s African American children in both age groups endured death rates more than double those of white children. For young white children, rates were 26 deaths per 100,000 compared to 55 among African American young children in 2005. Similarly, white elementary school-aged children died at a rate of 12 per 100,000 in 2005 compared to 29 among African American children.

In order to reach the HP 2010 goal for death rates among young children, the 2005 rate for white children would need to drop by roughly one-quarter and the African American rate by almost two-thirds in the next five years. This kind of improvement seems remote given recent trends between 2000 and 2005 with the death rates for young children showing little or no change for either age group or race.

A child death is a relatively rare occurrence in most Michigan communities. The majority of Michigan counties did not have a child death rate in 2005: only 38 counties were ranked, and 32 counties had rates for both years so a percentage change could be calculated. Ten counties that had child death rates in 2000 did not have a high enough incidence to calculate a rate in 2005.

Several strategies can address the hazards that threaten the lives of children. One key approach is strengthening communities through community building efforts, which intensify social networks and address cultural barriers to safeguarding children. The Good Neighborhoods Initiative of the Skillman Foundation is taking this approach in six Detroit neighborhoods. Another strategy is to support parents in their caretaking roles. Expanding family support and parent education efforts increases parental ability to be effective stewards of their children’s health and safety. Accessible materials in a variety of media and languages can ensure that this critical information reaches more parents.

Finally, the state and its communities have vital roles to play in ensuring that children have safe places to learn and play away from home. Safe equipment and construction in public playgrounds and recreation areas can provide relatively secure havens for physical activity. Parental access to tools and information to monitor safety in child care settings is also very important as many parents must rely on other adults to provide care while they are at work. Encouraging home-based child care providers to become licensed and creating support systems for “informal” providers can be accomplished through networks that can provide a variety of services to families and providers. To assure basic health and safety in child care settings, the state must create and enforce standards. Since half of child deaths result from disease, ensuring access to preventive care and medical services, particularly for children with chronic or infectious conditions is a key policy to pursue, particularly in underserved urban and rural settings.
Reduce adolescent deaths

On average, a total of 433 Michigan young people died each year in the 2003–2005 period compared to 456 in the 1998–2000 period. Males represented 72 percent of these deaths in 2005; overall they have well over double the risk of death during their teen years compared to their female peers—83 deaths per 100,000 compared to the female rate of 34.

This means that 59 of every 100,000 teens between ages 15–19 lost their lives each year in the 2003–2005 period, down slightly (8%) from the 1999–2000 annual average of 64. The 2003–2005 average is still 60 percent above the Healthy People (HP) 2010 target rate of 38.

The most substantial difference in the risk of teen deaths occurs between males and females. However, minority youth, specifically African Americans and Hispanics, suffer significantly higher death rates than their white peers. While the teen death rate among African American youth fell by 15 percent between 2000 and 2005, it would have to drop by another 62 percent in the next five years to achieve the HP 2010 target while the rate among white youth would need to drop by 26 percent.

Almost all Michigan counties with measurable teen death rates in 2005 had rates more than 20 percent above the HP 2010 target. Only two counties, Ingham and Washtenaw, had teen death rates in 2005 that were more than 20 percent better than the target.

Injuries caused by accidents, suicide or homicide rather than disease are the most likely cause of a teen death in Michigan. Overall Michigan youth are four times more likely to die from an accident, usually involving a motor vehicle, than from a homicide or suicide. In most cases of accidents involving a motor vehicle, the teen is the driver, and the accident often results from losing control of the vehicle with deadly consequences.

Michigan has instituted a graduated driver’s license system for young drivers so they spend more time behind the wheel with an adult in the vehicle before driving independently. In fact, Michigan is the only state in the nation to offer two segments of driver education with a threer-tiered graduated licensing system for teens before they take the wheel unsupervised.

As another strategy to lower the risk of death and injury among young drivers, beginning in 2007, Michigan also requires certification of driver education instructors and provider institutions. Instructors will need to renew their certification every two years. The state has mandated the use of a standard curriculum developed by the American Driver and Traffic Safety Education Association. The curriculum focuses on developing those skills needed in driving situations where young drivers are at highest risk. Roughly 2,000 instructors will be trained to use the curriculum.
Increase early and adequate prenatal care among pregnant women

Healthy People (HP) 2010 establishes 90 percent as the target for the percentage of pregnant women starting prenatal care during the first three months of their pregnancy. In 2005 in Michigan only 83 percent did so, up by three percentage points from 80 percent in 2000. The state will have to accelerate improvement in the next five years in order to make the HP 2010 goal that requires a seven percentage point gain.

Prenatal care during the first trimester is important because potential problems that could compromise fetal development and threaten infant or maternal health can be identified in time for intervention. Providers of effective prenatal care can assess a number of conditions, including maternal depression, habitual smoking, nutritional deficiencies, or substance abuse—all conditions that could jeopardize a healthy birth. Referrals for domestic violence counseling, housing assistance or food support can also be addressed. Prenatal care provides an opportunity for mothers to learn about breast feeding, infant nutrition, and child development. Women receiving late or no prenatal care are much more likely to deliver a stillborn baby or a low-birthweight baby than mothers who begin care in the first trimester.

Early prenatal care is especially important for women who have multiple risks of poor birth outcomes. These women can benefit from enhanced prenatal services that can include case management, smoking cessation programs, counseling services, transportation assistance and home visits. According to several studies, such services have improved birth outcomes for women at high risk.

Increasing access to prenatal care is a particularly important strategy for addressing maternal and infant health issues in Michigan. The state has relatively high rates of infant mortality (higher than 33 other states in 2004) and low-birthweight babies (higher than 29 other states). Similar to timely prenatal care, rates for these measures reflect striking disparities by race and income.

In Michigan in 2005 Asian and white women had the highest or best rates of timely prenatal care (86%), and African American women the lowest (69%). This gap of 17 percentage points is very troubling as African American women also have the highest or worst rates of babies born too soon or too small as well as maternal death due to pregnancy.

Access to timely prenatal care is essential to ensure the best possible birth outcomes for mothers and babies. While most women realize the need to start prenatal care as soon as they suspect they are pregnant, concerns about the cost of care, lack of insurance or changes in...
insurance may cause delay in getting an appointment during the first trimester. Research has also identified other contributing factors that influence timely access to prenatal care. Women with an unintended or unwanted pregnancy, no regular health provider before the pregnancy, or no post-high school education (as opposed to more years of education) were much more likely to wait to initiate prenatal care after the first trimester if at all.  

Almost all counties (74) in the state fell short of the HP 2010 target of 90 percent of mothers with live births having received prenatal care during the first three months of their pregnancy. The northern county of Cheboygan had the best rate with 94 percent receiving prenatal care in the first trimester as opposed to Berrien County where only 70 percent did. In fact, several counties in the northeastern corner of the state reflected rates that exceeded the target while counties in the west and southwest had some of the worst rates. In the southeast and central state regions the urban counties of Wayne and Ingham with large child populations had the worst rates.

Michigan’s efforts to reduce unintended pregnancies through Plan First, a family planning program that allows women with family income below 185 percent of poverty ($30,019 for a family of three) to obtain contraceptive services through the Medicaid program should help reduce the percentage of women who delay seeking prenatal care due to an unintended or unintended pregnancy. As access to private health insurance as an employment benefit eroded and wages stagnated, by 2005 roughly one of every three births in the state was covered by Medicaid.

The Healthy People (HP) 2010 target for low-birthweight births of 5 percent of all live births is 40 percent below the 2005 rate in Michigan of 8.3 percent. Furthermore, the state rate has been steadily rising in recent years and did not fall below 7.6 percent in the previous fifteen years. Between 2000 and 2005 the state rate rose slightly (8%) from 7.9 to 8.3 percent.

Michigan’s 2005 rate represents roughly 10,800 infants born each year weighing less than five and one-half pounds. Low-birthweight heightens the risk of developmental delay for the child, chronic health problems, and even death. Within the medical care system, low-birthweights account for about 10 percent of all pediatric medical costs each year.

Reduce low-birthweight

The low-birthweight rate in Michigan remained higher than the Healthy People 2010 target in the first half of the decade, and racial disparity persisted.

Source: Michigan Department of Community Health, Vital Records and Health Data Development Section
Almost all Michigan counties had low-birthweight rates more than 20 percent above the HP 2010 target. Only four counties—three in the Upper Peninsula—had rates 20 percent lower than the target.

The risk of low-birthweight for African American infants is more than double that of all other racial and ethnic groups and triple the HP 2010 target. A recent study discounted genetic causes as African-born women and U.S.-born white women had the same incidence of low-birthweight while U.S.-born African American infants experienced significantly higher rates.\(^{19}\) These findings suggest the disparities in low-birthweight between the races might result from social mechanisms.

To reduce the incidence of low-birthweight one key strategy that has been documented by research is ensuring access to adequate health care services before, during and after childbirth. Since women who deliver a baby with low-birthweight are at high risk for another, providing maternal services and supports can be critical in preventing another high-risk birth. Another strategy is to promote smoking prevention and cessation: cigarette smoking is the single most important known cause of low-birthweight. Maternal nutrition is key to a healthy birth as is adequate weight gain during the pregnancy. Women who gain less than 25 pounds are two to three times more likely to have a low-birthweight baby than women who gain 25 pounds or more.\(^{20}\)

### Reduce preterm births

The Healthy People 2010 target for preterm births (live births before 37 weeks of gestation) is 7.6 percent of all births. In 2005, Michigan’s preterm rate was 10.4 percent, almost the same as the 10.9 percent rate in 2000. In the 15 years between 1990 and 2005 the state’s percentage of babies born too soon did not drop below 10 percent.

Infants born too soon are at higher risk than full-term infants for multiple health problems including neurodevelopmental, respiratory, gastrointestinal, as well as those involving the immune system, central nervous system, hearing, and vision. Infants born at 35 weeks have only two-thirds of the brain mass of those born at term. They are more likely to experience learning difficulties, lower cognitive test scores, and behavioral problems later in life.\(^{21}\) Very preterm babies—are those born before 32 weeks of gestation—are at highest risk for death and long-term disability.

Preterm births have implications for the family, the community and society at large. In 2005, the estimated annual societal economic burden associated with preterm births in the U.S. totaled $26.2 billion—$16.9 billion in medical care services, $5.7 billion in lost household and labor market productivity associated with disabling conditions, $1.1 billion for special education services, and $1.9 billion for maternal delivery. The cost for each preterm infant was estimated to be $51,600.

For a family the financial burden of medical costs and extensive care for a preterm infant heightens...
family stress and increases the difficulties of managing employment and parenthood. Mothers of preterm infants report higher rates of maternal distress and depression. The average preterm infant in the U.S. spent 17 days in the hospital during the first 12 months, compared to 2 days for a full-term infant.

The majority (53) of Michigan’s counties had preterm birth rates more than 20 percent above the HP 2010 target. Six of the nine counties with preterm birth rates 20 percent lower than the target were located in the Upper Peninsula.

Significant racial, ethnic and socio-economic disparities persist in the incidence of preterm births. In Michigan, African American babies were at highest risk of being born too soon with a rate of 15.5 percent in 2005 compared to 9 percent for white babies. Women with low incomes, as well as those without health insurance coverage, have been shown to have higher rates of preterm births.

**Michigan’s 2005 preterm birth rate remained above the Healthy People 2010 target and racial disparities persisted.**

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<thead>
<tr>
<th></th>
<th>2000</th>
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<th>HP 2010 Target</th>
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<tr>
<td>Hispanic</td>
<td>8.8</td>
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<td>African American</td>
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Three-quarters of preterm births occur spontaneously. Roughly one in four preterm births results from medical intervention because of fetal or maternal conditions. The three leading risk factors for a spontaneous preterm birth include a history of preterm birth, a multiple birth, and uterine/cervical abnormalities. Infections, including untreated dental problems and diseases such as diabetes and hypertension, have also been associated with preterm births.

Federal support to expand research, public health capacity, professional education, and health services related to premature births became law in December 2006. This Prematurity Research Expansion and Education for Mothers who deliver Infants Early (PREEMIE) Act authorized $19 million for 2007 and $18 million a year for 2008 through 2011. Michigan is addressing preterm births with a number of strategies. The comprehensive Nurse/Family partnerships to improve outcomes for first time moms and their infants are active in four communities with high rates of infant mortality and other risk factors. An effort to educate pregnant women about the signs of early labor, as well as other community-based approaches designed to improve birth outcomes, has focused on high-risk African American women in the eleven Michigan communities with the highest African American infant death rates. Plan First, a family planning Medicaid waiver program that started in July 2006, makes women with family incomes below 185 percent poverty eligible for contraceptive services through Medicaid. Currently 35,000 women are enrolled. Another key strategy is to redevelop the perinatal regionalization system to make sure high-risk pregnancies are delivered at hospitals with adequate service levels of care, including Neonatal Intensive Care Units. Currently there is no systematic or formal way to know which hospitals have the requisite level of care for mothers and infants at risk.
Mental Health
Reduce suicide attempts among adolescents

While mental health is as essential as physical health to the overall well-being of children and youth, it attracts much less attention and significantly fewer resources. Mental health for children has been defined as the achievement of expected developmental, cognitive, social and emotional milestones and by the presence of secure attachments, satisfying social relationships, and effective coping skills, according to the U.S. Surgeon General’s Report in 1999.\(^{22}\)

While these outcomes are difficult to measure, epidemiologists generally agree that one in five children, ages 9–17, in the United States has a diagnosable mental or addictive disorder. Further, the rates of children affected by mental problems are higher in communities with elevated levels of such aggravating factors as poverty, child maltreatment, substance abuse, and low-birthweight. National studies suggest half the children in the child welfare system and roughly 70 percent of youth in the juvenile justice system suffer from a diagnosable mental health disorder. While there have not been reliable system-wide evaluations of children in the Michigan juvenile justice system, existing data are consistent with national studies.

Children with untreated or under-treated mental health problems are also at higher risk of expulsion or suspension from school so compounding the health problem with a lack of access to education. The confluence of “zero tolerance” policies in Michigan schools and lack of mental health treatment have dire consequences for children in the public school system. In fact, among all students certified as eligible for special education services, children with emotional impairments are far more likely to experience lengthy suspensions and expulsion than any other special education group due to “acting out” behaviors that are actually psychiatric symptoms. Furthermore, alternative programs for school-children in the K–12 system are often not readily available in Michigan.

Mental health problems have roughly the same prevalence among younger and older children. Early intervention is the key. A recent study found that when children reach the age of 14 with untreated emotional disorders, they often suffer from life-long mental illness, and that they are at great risk for developing even more serious psychiatric disorders.\(^{23}\) Also, the longer treatment is delayed the more the psychiatric disorders become intractable.

In Michigan estimates suggest 6–10 percent of children in child care settings are expelled or at risk of expulsion due to anti-social behavior or disturbance. Michigan’s Child Care Expulsion Prevention Project takes a comprehensive approach by reviewing the child care environment, the home setting, and the needs of the child. This service, which is available in limited sites, has allowed most children who received these services to remain in their programs or move to another more appropriate setting.

Too often, emotional disorders, especially depression or childhood bipolar disorder, which are often accompanied by feelings of hopelessness or high risk behaviors, result in a suicide attempt. (Suicide is considered an indirect marker for mental illness.) The Healthy People 2010 target is to reduce suicide attempts reported by high school students to 1 percent. In 2005 Michigan’s overall rate stood at 9 percent in 2005 with the


highest reported rate among all groups being that of American Indian students (15 percent). Suicide attempts among female high school students are higher than among their male counterparts—11 percent compared to 7 percent in 2005. Michigan experienced only minimal decline between 2001 and 2005 on this measure.

Despite the relatively large percentage of youth who report making a suicide attempt, the rate of teen death due to suicide ranged from 7 to 8 per 100,000 youth, ages 15–19, between 2000 and 2005. Over the 15 years between 1990 and 2005 the suicide rate for the state’s youth improved—dropping from 12 deaths per 100,000 youth to 8.

In 2005 Michigan male youth had a suicide rate three times that of females—12 compared to 4 deaths per 100,000. In 2005, 61 Michigan youth, ages 15–19, died as a result of suicide, 47 of them were males. Children committed to juvenile justice facilities are four times more likely to commit suicide than their counterparts in the general population, and far more likely to engage in self-injury.

Children who must turn to the public mental health system in Michigan face multiple barriers to treatment. In 2004 the Michigan Mental Health Commission identified the level and structure of funding for mental health services as the most significant factor limiting the promotion of mental health in children. Dollars spent per child for public mental health services and direct prevention have been on a steady decline in Michigan for the past five years. In 2005 only 7 percent of all mental health expenditures in Michigan were allocated to children with emotional disorders. Of the estimated 285,534 children under the age of 18 in Michigan with a serious emotional disturbance, fewer than 38,000 of them received public mental health services.

Children with private insurance similarly receive very limited treatment because of a lack of mental health parity in Michigan—an unequal amount of treatment available when compared to physical health treatment. Further, treatment sufficiency is undermined as private insurers often do not pay for residential treatment.

The failure of the mental health system to provide necessary services means that many more children with mental health issues end up in the child welfare and juvenile justice systems, which typically inflict further trauma. Once these children are in the child welfare system, they are less likely to be placed in permanent homes.

Youth who age out of the child welfare system suffer from major mental health problems and dependency on drugs or alcohol at much higher rates than the general population. This situation elevates their risk of ending up in jail or prison, further compromising their chances of success as an adult. Those mentally ill youth who spend time in the juvenile system are more likely to be placed in costly juvenile detention facilities or residential treatment centers.

Several policy options are available to state decision makers to enhance the mental health of children and youth. Adequate funding for public mental health services for children would improve the life chances for thousands of children in the state as well as result in decreased expenditures for child welfare, juvenile justice treatment, and prisons. Changes in Medicaid policy to expand provider capacity for enrolled children with mild or moderate mental conditions would increase access to services. Current outdated state Medicaid policies that require these children to obtain mental health services from a medical or osteopathic doctor at a very low payment schedule severely limit access to care. Finally, a serious review of the “zero tolerance” policies that have resulted in the suspension or expulsion of so many students with emotional problems is also in order. Denial of their right to an education is not in the long-term best interest of the state.

25 Ibid.
Nutrition
Reduce childhood overweight

Childhood nutrition and overweight have serious public health implications. In Michigan the percentage of children and adolescents who are overweight is increasing and studies show that fewer children and adolescents meet proper dietary standards. These trends bode a troubling future for the state. “Overweight children and adolescents are at risk for health problems during their youth and as adults. Overweight children and adolescents are more likely to have risk factors associated with cardiovascular disease (such as high blood pressure, high cholesterol, and Type 2 diabetes) than are other children and adolescents,” according to the Centers for Disease Control and Prevention. 26 Childhod and adolescent overweight is connected to a variety of other concerns including health related school absences, psychosocial risks, and the potential of becoming an obese adult. 27

Overweight is determined by using a standard calculation of the Body Mass Index (BMI). The BMI measures the relationship between an individual’s height and weight. For children and adolescents, the term “overweight” is used in place of “obese” and youth BMI’s are calculated using height, weight, gender and age. A child whose BMI is equal to or greater than the 95th percentile is considered overweight. 28

The Michigan Youth Risk Behavior Survey (YRBS) assesses weight and BMI ends among the state’s high school students. Between 2001 and 2005 all Michigan racial/ethnic groups of high school students except Hispanic or Latinos reflected an increase in the percentage of those determined to be overweight. The percentage of overweight adolescents in the Hispanic or Latino population decreased substantially—from 17 percent in 2001 to 13.5 percent in 2005, still higher than the state average of 12 percent.

In 2005 neither the Michigan average (12 percent) of overweight youth nor that of any racial/ethnic group came close to the Healthy People (HP) 2010 goal of 5 percent. According to the Michigan YRBS, however, male high school students were roughly twice as likely to be overweight as their female counterparts in 2005. The percentage of overweight female high school students in Michigan remained close to 8 percent between 2001 and 2005 while the percentage of overweight males rose to roughly 16 percent in 2005; more than triple the HP 2010 target.

Perhaps the most troubling finding is the startling 22 percent of African American adolescents who are considered overweight. This is over four times the HP 2010 target of 5 percent and well above the levels of other groups. Interventions must target this population and research should focus on uncovering the root causes of this distinction.

Lack of proper nutrition is one of many factors leading to the epidemic of adolescent overweight. In 2005 only 17 percent of Michigan’s adolescents reported consuming five or more servings of fruits and vegetables per day—a decrease from 21 percent in 2001, and significantly below the target. The HP 2010 targets are for half of children and youth to consume three daily servings of vegetables, and 75 percent to consume at least two servings of fruit each day. Unfortunately, Michigan youth are not close to reaching these goals.

Michigan adolescents, ages 10 through 17, in families with incomes below poverty were almost twice as likely to be overweight than their more affluent peers (21% vs. 11%), according to

27 Ibid.
28 Ibid.
the 2003 National Survey of Children’s Health. Their families typically live in socially and economically isolated communities where fresh fruit and vegetables are not readily available. Compared with more affluent communities, minority and low-income communities have fewer than average supermarkets and convenience stores that stock fresh, good-quality, affordable foods such as whole grains or low-fat dairy products and meats.

In addition, most families who rely on Food Assistance Program (FAP) benefits (also known as food stamps) often cannot use their electronic benefits transfer card (similar to a debit card) to purchase fresh produce from local farm markets where transactions are more likely to be in cash. Of even greater concern is the relatively low level of FAP benefits; the average participant receives 88 cents a meal or $237 per month for a family of three. Low-income parents face a significant challenge when they try to stretch a food budget to accommodate the nutritional needs of active teenagers.

In order to address these problems and work toward the HP 2010 goals Michigan policy makers, parents, communities and schools should undertake strategies to ensure Michigan youth have access to and consume more nutritious foods. Given the amount of time youth spend in school, many states have introduced policies to ensure the nutritious quality of foods and beverages available during the school day. Currently Michigan has no statewide policy regarding food and beverages sold or consumed in public school cafeterias beyond minimal USDA regulations. This has earned Michigan a grade of “F” along with 22 other states without specific state-wide school food policies.

States that received a grade of C or better have set policies including: limiting the calories from fat content of foods sold on school campuses, banning soda from vending machines, limiting or banning fried foods, and banning food-based fundraisers. A state policy concerning the food and beverages in Michigan’s schools would strengthen the impact of district level school wellness policies by ensuring consistent changes in schools throughout the state. It would also help curb the rising rate in childhood and adolescent overweight, as well as promote healthy school environments conducive to the formation of healthy eating habits.

Physical Activity
Increase participation in vigorous physical activities

Physical activity is a vital part of a healthy lifestyle. Physical activity helps maintain healthy bones and muscles, control weight, build lean muscle, prevent or delay the development of high blood pressure and can promote mental health by reducing feelings of depression and anxiety.

The Healthy People (HP) 2010 goal is for 85 percent of adolescents to participate in vigorous physical activity that promotes cardio-respiratory fitness three or more days per week for 20 or more minutes per occasion. In 2005, the Michigan Youth Risk Behavior Survey found 62 percent of the state’s high school students reported such a level of activity, down from 65 percent in 2003. The data by gender, racial/ethnic, and age groups showed a gap of 14 percentage points between the highest rate and the HP 2010 target, as well as some dramatic disparities.

Female high school students in Michigan were far less likely to participate in vigorous physical activity than their male counterparts. In 2005, only 57 percent of females versus 72 percent of males participated in such activity. Female high school students also have more changes to make to reach the HP 2010 target of 50 percent for daily school-based physical activity. Roughly 23 percent of Michigan females reported participating in daily school-based physical activity compared with 37 percent of males.

Calculations by ChildTrends. Washington, D.C.

Under USDA regulation, foods of minimal nutritional value (FMNV) may not be sold inside of the cafeteria or area where meals are eaten. However, many unhealthy foods such as candy bars and potato chips are not considered FMNV and therefore are not restricted from sale. The USDA regulations do not cover any foods outside of the area where lunches are sold and eaten.

Center for Science in the Public Interest; School Foods Report Card. (http://www.cspinet.org/nutritionpolicy/sf_reportcard.pdf)


Vigorous physical activities are defined as exercise or participation in physical activities that make the participant sweat and breathe hard.
Rates of vigorous physical activity varied significantly among youth in Michigan’s racial and ethnic groups. While 71 percent of American Indian students reported participating in this amount of vigorous physical activity, only about 53 percent of African American students reported activity at the desired level. Such a low participation rate among African American adolescents in Michigan is particularly troubling in the context of other health disparities, such as overweight.

In order to meet the HP 2010 target in vigorous physical activity for adolescents, Michigan must also reverse the downward trend in such activity as adolescents grow older. In 2005, while 71 percent of all 9th grade students participated in the recommended amount of weekly vigorous activity, only 52 percent of 12th grade students did so. This trend suggests that adolescents are not making exercise a habit as they move toward adulthood and may drift into a sedentary lifestyle in their adult years, incurring the health consequences flowing from minimal activity.

Many interventions aimed at improving youth health focus on the school environment. Schools in Michigan, in partnership with both governmental and non-profit agencies, are working to improve health outcomes for their students through several initiatives. For the first time, grade level content expectations for physical education have been developed for kindergarten through eighth grade as well as for high school. By January 2008 these grade-specific outcomes will become part of the state curriculum documents. The Class of 2011, now ninth graders, will have to meet those specific expectations for the new required high school credit in health/physical education.

Schools are working to implement local school wellness policies required by the Child Nutrition and WIC (The Special Supplemental Nutrition Program for Women, Infants, and Children) Reauthorization Act of 2004. The Act mandates that schools work to create healthier environments for students—including promoting physical activity and offering quality physical education programs. To this end the Michigan Department of Education is urging districts to adopt the state board policy on quality physical education by offering daily physical education, and align curriculum, instruction and assessment with state standards.

Communities, local officials, developers and families also have key roles to play in providing opportunities and environments for children and youth to enjoy physical activity. Safe and well-maintained parks, playgrounds, hiking trails, and sports centers provide the vital spaces that encourage physical activity.

35 Michigan Department of Community Health, Cardiovascular Health, Nutrition and Physical Activity Section, Healthy Schools Healthy Students. (http://www.mihealthtools.org/healthyschools.asp)
Respiratory Diseases
Reduce asthma hospitalizations among young children.

Asthma is the chronic disease most commonly suffered by children in the U.S. Its symptoms are episodic, triggered by a range of stimuli from viral infections to stress; however, the underlying inflammation is continuous. The disease can be life-threatening, but symptoms can be controlled through proper management. Management techniques include avoiding those stimuli that trigger attacks, taking medication to minimize and prevent symptoms, and obtaining frequent medical follow-up. Most cases can be managed by an active partnership between the child’s primary care provider and well-informed parents. Roughly 9 percent of children under the age of 18 in Michigan have asthma.

Asthma prevalence does not differ significantly by racial and ethnic groups among adults in Michigan. The rate of hospitalizations for asthma among children provides a measure of families’ access to quality health care in the community as well as an indicator of the extent of serious respiratory distress among the child population. The assumption is that asthma symptoms severe enough to require hospitalizations could have been avoided in most instances if the child had received appropriate and timely outpatient care. In 2005 Michigan’s hospitalization rate for young children under the age of five of 47 per 10,000 was essentially twice as high as the national Healthy People (HP) 2010 target rate of 25.

Between 2000 and 2005, the Michigan rate declined by only two percentage points, nowhere near the kind of improvement required to make substantial headway towards the HP 2010 target. Even more distressing is the enormous gap between the asthma hospitalization rates for white and African American youngsters. African American preschoolers had double the rates of hospitalization with asthma as the primary diagnosis as their white peers—111 hospitalizations per 10,000 compared to 47 for young white children in 2005.

These disparities persist across childhood, and African American children also face much higher risk of death from the disease. Among all the state’s children who died due to asthma between 2002 and 2005, African American children represented roughly 80 percent of the deaths while comprising only 17 percent of the child population. Autopsies of the state’s victims of asthma related deaths revealed almost all (90%) showed symptoms of slow onset, hence their deaths were preventable.

National studies also reflect higher rates of asthma mortality among African Americans, as well as low-income groups, and populations with low educational levels. These disparities are influenced by such factors as differential access to care due to type of coverage and availability of Medicaid providers, exposure to environmental pollutants in available housing, and crowded living conditions that increase exposure to allergens and infections. In Michigan, two of every three children who died due to asthma were low-income (enrolled in Medicaid). (Children in families with income below 150 percent of the poverty level qualify for Medicaid.) Environmental conditions such as particle pollution, a combination of fine solids and aerosols suspended in the air, have an especially detrimental effect on children, especially those with asthma. Burning fuel—from woodstoves to diesel trucks and buses to coal-fired power plants—is a major source of the smallest types of particle pollution. Children living in industrialized areas with heavy traffic are clearly at highest risk of respiratory problems from this type of pollution. Most low-income families have limited options in their choice of housing, thus making it difficult to evade the stimuli that may be triggering asthmatic symptoms. The disparate impact

36 American Lung Association. (www.lungusa.org)
38 Ibid.
40 Ibid.
41 Ibid.
of environmental pollution on minority communities has been well-documented.42

Secondhand smoke also threatens the respiratory health of children and triggers asthma attacks. Cigarette smoke produces large amounts of particle pollution among its many toxic components. In 2004 Michigan’s percentage of live births to mothers who had smoked during pregnancy was four percentage points higher than the national average—14 percent compared to 10 percent nationwide.43 Mothers who smoked during their pregnancy are also likely to smoke during the early years of their child’s life. More than one of every five Michigan adults smoked in 2005, reflecting a rate higher than 32 other states.44

Using primarily federal funding, the Asthma Initiative of Michigan (AIM) at the Department of Community Health addresses asthma with multiple strategies. It targets the identification and elimination of asthma disparities as well as assesses the extent of asthma and its treatment. This funding also supports 11 local asthma coalitions, which provide direct services and programs in communities across the state. Two local asthma coalitions in Genesee County and Detroit are helping to implement an initiative called the Asthma Health Disparities Collaboratives (HDC) in Federally Qualified Health Centers in their communities. This process involves reviewing and altering practices to improve:
- the quality of care delivered to the medically underserved,
- the efficiency and management of health centers, and
- health outcomes.

AIM funding supports outreach efforts such as the Michigan Communication Network that includes an interactive website www.getasthmahelp.org, a toll free information line 1-866-EZLUNGS, and a clearinghouse of resources. These resources provide access to asthma information and encourage communication among health professionals, persons with asthma, and the general public.

Numerous efforts are underway to raise awareness in schools of the serious nature of asthma and the importance of the relationships between environmental triggers such as secondhand smoke and asthma. The Healthy School Action Tool (HSAT), which is available online to help schools assess their school health environment, also assists schools to create an action plan for making improvements such as developing and/or adopting a model asthma policy.

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43 Annie E. Casey Foundation, KIDS COUNT Project. Right Start. 2007
methamphetamine declined from 9 percent in 1999 to 4 percent in 2005.

Among children of color, the outlook is mixed: African American adolescents were involved in binge drinking at less than half the rate of white youth (11 percent versus 24) while Hispanic/Latino youth had the worst rate with 35 percent in 2005.

Similarly the most prevalent form of substance abuse—binge drinking within the last 30 days—dropped from 32 percent in 1997 to 23 percent in 2005. (Binge drinking involves five or more drinks in a row within a couple of hours.) While the percentage of high school seniors reporting at least one episode of binge drinking within the past month dropped from 29 to 23 between 2001 and 2005—a decline of six percentage points, it would have to drop by another 12 points to meet the Healthy People (HP) 2010 target of 11 percent. Although the state may not reach that target, if the trend continues to show the same substantial improvement of the first five years of the decade, it will represent a major achievement.

Steroid use among Michigan high school students has declined from 5 percent of students in 1997 to 3 percent in 2005, according to the Youth Risk Behavior Survey. The HP 2010 target is less than 1 percent (.4%) of steroid use among tenth and twelfth graders. Steroid use, often to promote performance in sports, is more prevalent among male than female students.

Multiple programs and agencies address substance abuse prevention efforts for youth either directly or indirectly. Schools clearly have a key role to play in providing health education about the impact of various substances on mind and body and creating a healthy physical as well as social environment in the school. Enhancing the opportunities for all children to be successful in school could make a big difference as youth who typically receive below average grades are more than twice as likely to have drunk alcohol or used marijuana before the age of 13, or used inhalants. They are also almost twice as likely to have “binged” on alcohol as their peers who typically receive above average grades—37 percent compared to 20 percent.

Most of the funding for school and community efforts to prevent substance abuse in Michigan comes from the federal government through the Office of Drug Control Policy (ODCP) within the Department of Community Health. The ODCP oversees substance abuse treatment and prevention and administers the Safe and Drug Free Schools and Communities Act for schools and community organizations. In Fiscal Year 2008 the School Formula Grants allocated roughly $9.7 million to school districts to provide prevention programs to youth during school hours. Through a competitive process the Governor’s Discretionary Grant provided another $2.5 million to non-profit agencies for after-school and/or summer prevention programs targeting youth who are not normally served by state and local educational agencies. These grants ranged from $20,000 to $150,000.

45 Healthy People goals related to use of inhalants were based on all adolescents, ages 12-17, for which no Michigan data are available; the Youth Risk Behavior Survey includes only high school students.
Funding for substance abuse prevention efforts is inadequate, and opportunities for treatment are not readily available. In Michigan fewer than one in five of those who have a substance “dependency” and fewer than one in 44 persons with a substance abuse problem receive treatment services for which they are clinically eligible. In Fiscal Year 2006 roughly 3,800 children and youth under the age of 18 in Michigan were admitted to the state-funded treatment system. Unfortunately too many untreated individuals often end up in other even more costly systems such as child welfare, juvenile justice, or prison.

**Tobacco Use Reduce tobacco use by students in grades 9–12**

Cigarette smoking is still considered the chief preventable cause of premature disease and death in the U.S. The use of tobacco products is almost always started and established in adolescence, and Michigan has made substantial progress in reducing tobacco use among its youth. In 2001, almost one-third (30 percent) of Michigan high school students reported having used a tobacco product including cigarettes, chewing tobacco or cigars within the previous 30 days; in 2005 less than one-quarter (23 percent) did. This dramatic progress has brought the state within two percentage points of the Healthy People (HP) 2010 target of 21 percent. The target level still means one of every five students is using a highly addictive substance that will have a long-term impact on their health and well-being as well as that of the people around them through second-hand smoke.

In all respects, cigarette smoking is becoming much less prevalent among Michigan high school students. Both experimentation and early introduction declined between 2001 and 2005. The percentage of Michigan youth who had ever tried smoking decreased from 64 to 52 percent, and the percentage of those who reported smoking an entire cigarette before the age of 13 dropped from 23 percent to 16 percent.

During that same period the percentage of all Michigan students who reported having smoked one or more cigarettes within the previous 30 days dropped from 26 to 17—a rate within one percentage point of the HP 2010 target of 16 percent. Unfortunately among older youth, 11th and 12th graders, overall smoking rates are substantially above the target—at 25 and 28 percent. Rates for American Indian (56 percent) and Hispanic (33 percent) youth were even higher.

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46 Drug dependence is characterized by compulsive craving, seeking and use that persist even with extreme, negative consequences. It is frequently accompanied by a wide range of dysfunctional behaviors resulting in family, school, and health problems.

In fact, African American youth were the only racial/ethnic group with a rate below the HP 2010 target (46 percent lower than that of white youth in 2005).

The substantial decline in Michigan youth who report starting to smoke before the age of 13 is particularly important as the earlier smoking starts, the higher the likelihood of continuing to smoke as an adult.49 Earlier onset is also linked to heavier use, and the heavier smokers are more likely to experience serious tobacco-related health problems such as lung cancer and other fatal malignancies, atherosclerosis and coronary heart disease, and chronic obstructive pulmonary disease. Smoking during adolescence also appears to reduce lung growth and capacity, limiting physical activity and leading to shortness of breath and wheezing.50

More than half (57 percent) of Michigan students who were current smokers reported having tried to quit during the past 12 months. The HP 2010 target is for 84 percent of current high school smokers to have engaged in cessation efforts. Since nicotine is so highly addictive, on average former smokers try to quit ten times before being successful. Although the availability of smoking cessation programs for youth is limited, the American Lung Association has developed a program (Not on Tobacco) for high school students and offers trainings. The Michigan tobacco “quit line” (800/480-7848) is another resource as it offers free smoking cessation counseling to anyone over the age of 12.

Over the last several years the pernicious impact of tobacco on health has been well publicized, and the successful lawsuit against the tobacco companies resulted in settlement dollars to the states to compensate for the medical expenses involved in the treatment of the effects of smoking. Unfortunately Michigan has spent very little of its settlement dollars on prevention and cessation efforts. In fact, to reconcile a large part of the deficit for the fiscal year ending September 2007, lawmakers voted to trade $900 million in future payments for an immediate sum of $400 million. Roughly one-third of the $5.5 million in funding to support Michigan’s tobacco prevention and intervention efforts comes from the federal government. While the Michigan Department of Community Health does not have the resources to launch a statewide comprehensive youth tobacco prevention campaign, it supports many school and community efforts.

Many studies suggest that organized prevention and intervention programs keep young people from starting or continuing to use tobacco products. School-based efforts include health education, partnerships between schools and the local community, and healthy school environments.51 Prevention programs based on a model of identifying social influences on smoking and developing student skills to resist those influences have demonstrated consistent success.52 The comprehensive school health curriculum of the Michigan Model includes tobacco prevention lessons from kindergarten through 12th grade. Following the June 2005 recommendation of the Michigan State Board of Education, roughly 42 percent of Michigan schools have implemented 24/7 tobacco free policies to prohibit tobacco use on school property, as well as at off campus school-sponsored events.

The effectiveness of school-based programs can be enhanced and reinforced by coordinated community-wide programs involving parents, youth-oriented mass media, and other elements of adolescents’ social environments.53 Social norms about smoking are changing in Michigan communities. Since the beginning of the decade 20 Michigan counties have instituted smoke free workplaces and public places. With similar ordinances in four Michigan cities, including Marquette, Detroit, Traverse City, and Grand Rapids, nearly half of Michigan’s population is affected.54

Since 2005 the national decline of tobacco use slowed. Influencing factors could include relatively smaller annual increases in the retail price of cigarettes,55 a 27 percent reduction in funding for comprehensive state programs in tobacco control and prevention between 2002 and 2006, and a doubling of tobacco industry advertising and promotional expenditures, primarily focused on price-discounting strategies ($6.7 billion in 1998 to $15.1 billion in 2003).56 Michigan, which had the fourth-highest cigarette tax ($2 a pack) in the nation as of July 2005, may see continued declines in tobacco use among adolescents.

49 Ibid.
50 Ibid.
51 Ibid.
52 Ibid.
53 Ibid.
54 In 1997 the City of Marquette, which adopted an ordinance to prohibit smoking in most worksites and public accommodations, including restaurants, had the most comprehensive smoke-free ordinance in the state at the time.
55 Proposed funding for the reauthorization of the SCHIP program depends on a very large federal tax increase on a pack of cigarettes. This dramatic increase in the cost of cigarettes would discourage more youth from smoking.