The Health chapter is generously sponsored by Kroger Pharmacy.
INTRODUCTION

Central Indiana faces complex problems regarding health and illness, many of which are described in detail in the following pages. An understanding of the social distribution of health and illness in the community, however, must be developed within the context of the challenges related to health care access.

Over the last five decades, the cost of health care has grown dramatically, and projections suggest that the costs will continue to rise exponentially.¹ There are many factors behind high health care costs, including administrative costs, high health care prices and high rates of service utilization.² Economists also acknowledge that problems in our employer-sponsored health insurance system, consumer and provider demands for more expensive medical technology, inefficient distribution of health care services and widespread public health problems also are contributing to higher health care costs.³,⁴,⁵

Over the years, Americans have come to rely primarily on employer-provided health insurance to help pay for necessary health care. Employers began offering health insurance in the 1940s to help attract and retain employees,⁶ but the cost of employer-sponsored health insurance has risen dramatically over the past decade due to the increasing cost of care.⁷,⁸

Employers are managing these rising costs by shifting more of the costs to employees, limiting the nature and extent of coverage, or even choosing to stop providing health insurance to their employees.⁹,¹⁰ Both rising health care costs and changes in employer-sponsored health insurance have intensified the pressure on public health care programs, including Medicare, Medicaid, the State Children’s Health Insurance Program, and other health programs for the poor and uninsured.¹¹ These changes also are contributing to the growing numbers of working individuals and families who are “underinsured” – they lack adequately coverage to protect them from the financial hardship of a major illness.¹²

In many ways, current health problems are a function of how health care is financed. Indeed, research has documented a strong connection between health insurance coverage and the health status of Americans.¹³,¹⁴,¹⁵ Individuals with access to health insurance tend to be both healthier and more proactive in taking steps to prevent serious illness. Those who lack access to high quality health insurance are often sicker because they delay seeking care until the illness is much worse or because they seek care in uncoordinated places or fail to obtain preventive care.¹⁶ Families USA recently estimated that 3,100 working-age Hoosiers died between 2000 and 2006—or nine working-age adults per week—because they had no health insurance.¹⁷
The relationship between health insurance and access to care has also been cited as a principal factor that explains disparities in access to care and treatment outcomes for different racial and ethnic minorities. Health policy experts now agree that access to health insurance is a fundamental cause of health problems in the United States because it determines both whether and how people access health care services.

As the national debate over how to reorganize our health care system continues, improving access to public and private health coverage must remain a major goal for Central Indiana.

CURRENT CONDITIONS

Uninsured

Between 1999 and 2006, the percentage of uninsured under age 65 in Indiana grew from approximately 10% to 13% (see Figure 1), an increase nearly 50% larger than the increase observed in the nation as a whole during this same period.

In addition, over the past eight years, Indiana has experienced a four-percentage point decline in the population with employer-sponsored insurance (see Figure 2). Between 2000 and 2004 increasing uptake of public health insurance, notably the State Children’s Health Insurance Program (SCHIP) programs offered through the states, somewhat offset the decline in private insurance; however the Indiana percentage of adult Medicaid enrollees remained relatively unchanged. The modest recent declines in the rate of uninsured individuals can be attributed entirely to a higher percentage of the population who have obtained coverage in the individual and group insurance markets.

Figure 1. Percent of the Population Under 65 who are Uninsured at Any Given Time, Indiana vs. United States, 1999–2006

Source: U.S. Census Current Population Survey data, extract dated 10-31-07. State data is accurate to within ± 1.4% 95 times out of 100.
What Affects the Rate of Uninsured People?

People in Indiana have higher rates of access to employer-sponsored health care plans than does the U.S. population as a whole (see Figure 2). At the same time, Indiana’s uninsured rate grew from 10% to 13% between 1999 and 1994. There are several aspects of the U.S. and Indiana economies that can affect the uninsured rate:

- The mix of industry in an economy, and the extent to which employers in local industries are able to offer health insurance to their employees, affect the uninsured rate. A decline in manufacturing typically means a loss of unionized jobs with benefits while a growth in service industries typically means a growth of part-time and low-paying jobs without benefits.
- There is a direct correlation with changes in the unemployment rate to the uninsured rate. Economies that are booming typically have lower uninsured rates. Economies facing job loss experience higher uninsured rates when employees who lose their jobs also lose access to their employers’ group insurance plans.
- The mix of available full-time and part-time positions available in an economy has an affect. When employers increase their part-time employment opportunities at the expense of full-time positions, fewer people qualify for employee-sponsored health care plans.
- As employers cope with rising employee health insurance care costs by increasing the employee portion of the premium, or discontinue offering health care benefits altogether, more employees drop out of coverage.

Figure 2. Percent of Total Population with Employer-Sponsored Health Insurance, U.S. and States in the Great Lakes Region (1999 vs. 2006)


Despite increases in the numbers of uninsured and the drop in the percentage of employers offering coverage, employer-provided health insurance remains the major primary source of coverage for Hoosiers (see Table 1). Approximately 26% of Hoosiers receive health insurance coverage through Medicare, Medicaid or some other government-supported program.

<table>
<thead>
<tr>
<th>Coverage</th>
<th>IN Number</th>
<th>IN %</th>
<th>U.S. Number</th>
<th>U.S. %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employer</td>
<td>3,765,514</td>
<td>60%</td>
<td>158,515,473</td>
<td>54%</td>
</tr>
<tr>
<td>Individual</td>
<td>270,546</td>
<td>4%</td>
<td>14,515,865</td>
<td>5%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>678,353</td>
<td>11%</td>
<td>37,994,482</td>
<td>13%</td>
</tr>
<tr>
<td>Medicare</td>
<td>707,781</td>
<td>11%</td>
<td>35,049,875</td>
<td>12%</td>
</tr>
<tr>
<td>Other Public</td>
<td>20,927</td>
<td>0%</td>
<td>2,986,514</td>
<td>1%</td>
</tr>
<tr>
<td>Uninsured</td>
<td>790,104</td>
<td>13%</td>
<td>46,994,627</td>
<td>16%</td>
</tr>
<tr>
<td>Total</td>
<td>6,233,225</td>
<td>100%</td>
<td>296,056,836</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Kaiser Family Foundation.
http://www.statehealthfacts.org/profileind.jsp?ind=125&cat=3&rgn=16

Recent county-level statistics for the numbers of individuals who lack health insurance coverage are not available. Tables 2 and 3 below show two different estimates for both the adult and child populations in each county. 21,22

The number of uninsured in each county most closely corresponds to the county’s total population, with Marion County having several times more uninsured than any other county, followed by Hamilton, Johnson, and Hendricks Counties. As a proportion of the total population, Marion County also had the highest percentage of uninsured people, while Boone and Hendricks Counties had the smallest proportions. An important portion of children and adults in all eight counties are uninsured, with uninsured rates ranging from approximately one in fifteen (Boone County adults) to one in seven (Marion County adults).

Table 2: Estimates of Uninsured Adults in the Indianapolis MSA

<table>
<thead>
<tr>
<th>County</th>
<th>2006 Adult Population</th>
<th>Scaled 2000 County Uninsured Rates</th>
<th>2006 Estimate of Uninsured Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>38,378</td>
<td>6.7%</td>
<td>12,139</td>
</tr>
<tr>
<td>Hamilton</td>
<td>179,952</td>
<td>8.9%</td>
<td>16,055</td>
</tr>
<tr>
<td>Hancock</td>
<td>49,048</td>
<td>8.9%</td>
<td>16,055</td>
</tr>
<tr>
<td>Hendricks</td>
<td>98,141</td>
<td>8.2%</td>
<td>14,880</td>
</tr>
<tr>
<td>Johnson</td>
<td>99,587</td>
<td>10.3%</td>
<td>18,600</td>
</tr>
<tr>
<td>Marion</td>
<td>632,683</td>
<td>14.4%</td>
<td>26,040</td>
</tr>
<tr>
<td>Morgan</td>
<td>52,577</td>
<td>9.8%</td>
<td>17,817</td>
</tr>
<tr>
<td>Shelby</td>
<td>32,336</td>
<td>9.7%</td>
<td>17,621</td>
</tr>
<tr>
<td>8-county Total</td>
<td>1,182,702</td>
<td></td>
<td>139,207</td>
</tr>
</tbody>
</table>

Table 3: Estimates of the Number of Uninsured Children in the Indianapolis MSA

<table>
<thead>
<tr>
<th>County</th>
<th>2006 Childhood Population</th>
<th>Scaled 2000 County Uninsured Rates</th>
<th>2006 Estimate Of Uninsured Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>15,683</td>
<td>6.8%</td>
<td>2,743</td>
</tr>
<tr>
<td>Hamilton</td>
<td>71,027</td>
<td>9.9%</td>
<td>3,990</td>
</tr>
<tr>
<td>Hancock</td>
<td>16,002</td>
<td>9.4%</td>
<td>3,791</td>
</tr>
<tr>
<td>Hendricks</td>
<td>33,063</td>
<td>9.0%</td>
<td>3,641</td>
</tr>
<tr>
<td>Johnson</td>
<td>33,729</td>
<td>10.3%</td>
<td>4,140</td>
</tr>
<tr>
<td>Marion</td>
<td>232,821</td>
<td>13.1%</td>
<td>5,287</td>
</tr>
<tr>
<td>Morgan</td>
<td>17,713</td>
<td>9.4%</td>
<td>3,791</td>
</tr>
<tr>
<td>Shelby</td>
<td>11,778</td>
<td>8.5%</td>
<td>3,442</td>
</tr>
<tr>
<td>8-County Total</td>
<td>431,816</td>
<td></td>
<td>30,825</td>
</tr>
</tbody>
</table>
**Underinsured**

In recent years, concern over those with no health insurance has grown substantially. Much less well understood, however, is the problem of the “underinsured”—that is, individuals with health insurance that does not provide adequate protection against the financial risks of illness.27

Faced with rising health insurance premiums, employers have adapted by purchasing less comprehensive policies for their employees, implementing health savings account programs, and/or shifting more of the costs to their employees.28 This, in turn, increases the relative financial risk of illness for individual employees.

The problem of underinsurance is particularly acute for middle and low-income working class individuals who work in jobs that do offer some health insurance, but who do not earn enough to buy additional health insurance and earn too much to qualify for Medicaid.

Data were not available to estimate the number of underinsured Central Indiana residents. Instead, the number of Central Indiana residents who had insurance but experienced a financial barrier to health care access was estimated using data from the CDC and the U.S. Census Bureau. The number of insured individuals was estimated by applying county level insurance rates from the U.S. Census Bureau's 2000 Small Area Health Insurance Estimates for Counties and States to the 2006 U.S. Census Bureau's population estimates for the same counties.29 Data from the BRFSS was used to estimate the rate at which the insured experience financial barriers to health care.30 Using these data, approximately 137,589 individuals (8.5% of all insured individuals) in Central Indiana experienced a financial barrier to health care access despite having health insurance coverage.

<table>
<thead>
<tr>
<th>Number of Insured (U.S. Census Bureau)</th>
<th>Number of Insured Experiencing Financial Barriers (Author's Estimate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone 52,938</td>
<td>4,500</td>
</tr>
<tr>
<td>Hamilton 251,980</td>
<td>21,418</td>
</tr>
<tr>
<td>Hancock 64,551</td>
<td>5,487</td>
</tr>
<tr>
<td>Hendricks 130,325</td>
<td>11,078</td>
</tr>
<tr>
<td>Johnson 132,597</td>
<td>11,271</td>
</tr>
<tr>
<td>Marion 872,986</td>
<td>75,077</td>
</tr>
<tr>
<td>Morgan 69,605</td>
<td>5,916</td>
</tr>
<tr>
<td>Shelby 43,712</td>
<td>3,716</td>
</tr>
<tr>
<td>Central Indiana Total 1,618,694</td>
<td>137,589</td>
</tr>
</tbody>
</table>

Author's estimates using BRFSS and United States Census Bureau Small Area Health Insurance Estimates

**Other Disparities in Access to Care**

Health care services are not equally distributed within communities, which also has an important effect on how and when people access care.31,32 Other factors that limit access to health care include provider shortages, and economic, cultural or lingual barriers to accessing care. The U.S. Department of Health and Human Services / Health Resources and Services Administration (HRSA) / Bureau of Health Professions National Center for Health Workforce Analysis develops shortage designation criteria and uses them to decide whether or not a geographic area or population group is a Health Professional Shortage Area or a Medically Underserved Area or Population. More than 34 federal programs depend on the shortage designation to determine eligibility or as a funding preference.33
Medically Underserved Areas (MUA) may be a whole county or a group of contiguous counties, a group of county or civil divisions or a group of urban census tracts in which residents have a shortage of personal health services.

Medically Underserved Populations (MUPs) may include groups of persons who face economic, cultural or linguistic barriers to health care.

Health Professional Shortage Areas (HPSAs) may have shortages of primary medical care, dental health or mental health providers and may be urban or rural areas, population groups or medical or other public facilities.

In the Indianapolis metropolitan area, HRSA identified Johnson County/Trafalger and multiple areas of Marion County as being medically underserved.

### Table 5: Indianapolis Metro Area Health Professional Shortage Areas

<table>
<thead>
<tr>
<th>County</th>
<th>Area/MUA Description</th>
<th>MUA</th>
<th>MUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Johnson</td>
<td>Trafalger/Johnson County service area</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Marion</td>
<td>Multiple geographic areas and facilities</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>


In the Indianapolis metropolitan area, Hendricks, Johnson, and Marion counties have HPSAs.

### Table 6: Indianapolis Metro Area Health Professional Shortage Areas

<table>
<thead>
<tr>
<th>County</th>
<th>Area/Facility</th>
<th>Primary Care</th>
<th>Dental Health</th>
<th>Mental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hendricks</td>
<td>Plainfield Correctional Facility</td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Johnson</td>
<td>Trafalger Family Health Center</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Marion</td>
<td>Multiple geographic areas and facilities</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>


A person’s age, gender, race, ethnicity and socioeconomic status affect his or her pattern of health care utilization. Lack of insurance is most common among working age adults, since Medicaid covers most children and Medicare covers most persons over 65 years old. Further, lack of insurance is more common among men since Medicaid covers pregnant women. Lack of transportation to services may also limit access to health care.

The 2006 National Healthcare Disparities Report (NHDR) tracks disparities in both quality of and access to health care in the United States. The report tracks 22 measures of quality and six measures of access. The report notes that disparities remain prevalent:

- Across all dimensions of quality of health care including: effectiveness, patient safety, timeliness and patient centeredness.
- Across all dimensions of access to care including: facilitators and barriers to care and health care utilization.
- Across many levels and types of care including: preventive care, treatment of acute conditions and management of chronic disease.
- Across many clinical conditions including: cancer, diabetes, end stage renal disease), heart disease, HIV disease, mental health and substance abuse, and respiratory diseases.
- Across many care settings including: primary care, home health care, hospice care, emergency departments, hospitals and nursing homes.
- Within many subpopulations including: women, children, elderly, residents of rural areas, and individuals with disabilities and other special health care needs.
Selected findings from the report include:37

- For sizable proportions of measures, racial and ethnic minorities and the poor receive lower quality care.
  1. Blacks received poorer quality care than Whites did for 73% of core measures and better quality care for 9%.
  2. Asians received poorer quality than Whites did for 32% of core measures and better quality care for 36%.
  3. American Indians/Alaska Natives received poorer quality care than Whites did for 41% of core measures and better quality for 14%.
  4. Hispanics received poorer quality of care than non-Hispanic Whites did for 77% of core measures, and better qualify care for 18%.
  5. Poor people received lower quality of care than high-income people did for 71% of core measures, and better qualify of care or 6% of core measures.

- For racial and ethnic minorities, some disparities in quality of care are improving and some are worsening. For the poor, most disparities are worsening.
- For many measures, racial and ethnic minorities and the poor have worse access to care.
  1. Blacks and Asians had worse access to care than Whites did for a third of core measures.
  2. American Indiana/Alaska Natives had worse access to care than Whites did for 17% of core measures.
  3. Hispanics had worse access than non-Hispanic Whites did for 83% of core measures.
  4. Poor people had worse access to care than high-income people did for all core measures.
- For racial minorities, most disparities in access to care that could be tracked are improving; for Hispanics and the poor, most disparities are worsening.

RESPONSE SYSTEMS

While Medicare is a federal program that covers most of the population over 65 years old, Medicaid is the principal social program that provides access to health care for the poor. Congress implemented the Medicaid program in 1965 to improve access to care for low income Americans. The federal government and individual states jointly fund the program, but each individual state administers its own Medicaid program within general guidelines established by the federal government.

In Indiana, the Office of Medicaid Policy and Planning (OMPP) within the Indiana Family and Social Services Administration offers Medicaid coverage through several programs that provide coverage for children, pregnant women, low-income families, and aging, blind and disabled adults. Enrollment in Medicaid has increased over the last few years, both nationally and in Indiana.38Table 5 shows the number of individuals in each of the eight Central Indiana counties who were enrolled in Medicaid programs (including CHIP) as of June 2007, by aid category. FSSA defines an “enrollee” as a person who enrolls in the public coverage program in a given year.

Nationally, Medicaid covers 12% of the U.S. population, and Indiana enrolls 16% of its population.39 Marion County has a substantially higher proportion of its population enrolled in Medicaid programs (18.5%) than other counties. In contrast, Hamilton County has the lowest proportion of its population enrolled in Medicaid programs (4.0%).

### Table 7: Medicaid Enrollment by County, June 2007

<table>
<thead>
<tr>
<th>County</th>
<th>% 2006 County Population Enrolled</th>
<th>Total Medicaid Enrollment</th>
<th>Children</th>
<th>Pregnant Woman</th>
<th>Aged</th>
<th>Blind and Disabled</th>
<th>(Other) Adult</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>7.2%</td>
<td>3,877</td>
<td>2,356</td>
<td>141</td>
<td>468</td>
<td>513</td>
<td>399</td>
</tr>
<tr>
<td>Hamilton</td>
<td>4.0%</td>
<td>9,925</td>
<td>6,424</td>
<td>452</td>
<td>952</td>
<td>1,335</td>
<td>762</td>
</tr>
<tr>
<td>Hancock</td>
<td>7.5%</td>
<td>4,883</td>
<td>2,945</td>
<td>172</td>
<td>565</td>
<td>703</td>
<td>498</td>
</tr>
<tr>
<td>Hendricks</td>
<td>5.2%</td>
<td>6,876</td>
<td>4,416</td>
<td>312</td>
<td>740</td>
<td>860</td>
<td>548</td>
</tr>
<tr>
<td>Johnson</td>
<td>9.2%</td>
<td>12,293</td>
<td>7,592</td>
<td>447</td>
<td>1,238</td>
<td>1,630</td>
<td>1,386</td>
</tr>
<tr>
<td>Marion</td>
<td>18.5%</td>
<td>160,463</td>
<td>107,161</td>
<td>5,127</td>
<td>9,936</td>
<td>16,691</td>
<td>21,548</td>
</tr>
<tr>
<td>Morgan</td>
<td>11.9%</td>
<td>8,346</td>
<td>5,077</td>
<td>251</td>
<td>687</td>
<td>1,188</td>
<td>1,143</td>
</tr>
<tr>
<td>Shelby</td>
<td>12.2%</td>
<td>5,400</td>
<td>3,263</td>
<td>194</td>
<td>465</td>
<td>884</td>
<td>594</td>
</tr>
</tbody>
</table>

Totals for 8 counties in UWCI Service Area: 13.1% 212,063 139,234 7,096 15,051 23,804 26,878

Percent of total enrollees: 65.7% 3.3% 7.1% 11.2% 12.7%

In an effort to control rising Medicaid costs, federal and state policymakers have implemented a number of cost-control strategies, including establishing new rules regarding covered services, developing managed care programs, changing eligibility guidelines and holding reimbursement rates steady for many basic services over the past decade. While these policies have helped contain the growth of the overall program, the result has been that providers are reimbursed at rates significantly lower than their cost of providing care. Consequently, the number of hospitals and physicians willing to accept Medicaid reimbursement has declined further limiting the options for low-income Medicaid patients to access care. The table below compares Indiana income eligibility guidelines to the rest of nation.

### Table 8: State Comparison of Medicaid Income Eligibility Guidelines

<table>
<thead>
<tr>
<th>Medicaid Eligibility Categories</th>
<th>State Low</th>
<th>State High</th>
<th>Indiana</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Parents</td>
<td>20</td>
<td>409</td>
<td>200</td>
<td>63%</td>
</tr>
<tr>
<td>Pregnant Women</td>
<td>133</td>
<td>300</td>
<td>200</td>
<td>133%</td>
</tr>
<tr>
<td>Infants</td>
<td>133</td>
<td>300</td>
<td>200</td>
<td>133%</td>
</tr>
<tr>
<td>Children 1-5</td>
<td>133</td>
<td>300</td>
<td>150</td>
<td>133%</td>
</tr>
<tr>
<td>Children 6-19</td>
<td>100</td>
<td>300</td>
<td>150</td>
<td>100%</td>
</tr>
</tbody>
</table>


### Safety-Net Hospitals and Community Health Centers

If an individual has no health insurance, inadequate health insurance or is on Medicaid, that individual will often have limited options for obtaining health care. Across Indiana, there are a number of providers who offer care to these people at no cost or on a significantly reduced-fee basis. While these providers are often referred to as the safety net system, on the whole these providers are a complex, informal patchwork of individual clinics and small networks of providers that may be unable to provide comprehensive services. Among them are many types of providers, including public hospitals, community health centers, Migrant Health Centers and school-based health centers.

Safety-net providers offer services on a voluntary basis funded by a complex mix of federal, state, and local revenues (e.g., disproportionate share funds, indigent care program), charitable donations, government and foundation grants and pro-bono service. Within Central Indiana, there are currently 22 state-recognized community health centers (19 in Marion County, one each in Boone, Madison, and Johnson counties) and each county has a public hospital. Wishard Health Services/Hospital in Marion County is the region's largest public health system. They and Clarian Health/Methodist Hospital serve the largest share of uninsured people in the six-county area, and uninsured patients comprise a majority of their patient base.

### Health Advantage Program

Marion County’s Health Advantage program has been identified as a model for the nation. It is a managed care program created in 1997 to meet the health care needs of Marion County’s low-income and uninsured residents. All Marion County residents who fall at or below 200% of the federal poverty level are eligible. Services include primary care, specialty care, laboratory, x-ray, prescriptions, inpatient care and mental health services, including substance abuse and addiction treatment.

Due to the success of the program, the Health Advantage program expanded in 2000 to include a disease management program and an electronic application process. The program’s goals include improving the overall quality of health care in Marion County, effectively coordinating and managing patient care, strengthening doctor/patient relationships, decreasing inappropriate emergency room use and producing reliable data to guide future decision-making.

Providers receive a per member/per month fee from the Marion County Health and Hospital Corporation. This structure encourages physicians and other health care providers to develop relationships with their patients and to be attentive to all of their health care needs. This structure is in contrast to the more typical “fee-for-service” system in which physicians are paid according to the services they perform. Fee-for-service encourages physicians to see as many patients and provide as many services as possible.
A steering committee comprised of a diverse group of health care providers and community leaders oversees the program. A sub-committee supervises the day-to-day operations of the program. There are task forces that monitor four key areas: medical services, case management, pharmacy and evaluation. Ultimately, these committees report to the Board of Trustees of Wishard Hospital, which is responsible for the Health Advantage program.44

Health Advantage members are required to choose a primary care site and are encouraged to develop a continuous relationship with their physician, leading to a higher quality of care. Upon enrollment, members receive a personalized membership card, 24-hour access to a nurse on-call hotline and other service components found in most commercial insurance plans. There are presently more than 57,000 Health Advantage members receiving services at more than 20 Health Advantage provider sites. Approximately two-thirds (67%) of the Health Advantage population is comprised of racial minorities, and one-third of enrollees are Hispanic. Data generated by the Robert Wood Johnson Community Tracking Study (conducted by the Center for Studying Health System Change) demonstrated that Health Advantage improved member access to health care, reduced annual inpatient days by 50% and decreased emergency department utilization by 30% in the studied population.45

Healthy Indiana Plan

In April 2007, Governor Mitch Daniels and the Indiana State Legislature enacted a new program, now known as the Healthy Indiana Plan (HIP), to extend health coverage to low income individuals and families who do not qualify for Medicaid or Medicare and do not have access to employer-sponsored health insurance.

To be eligible, individuals must be uninsured for at least six months, cannot be eligible for employer-sponsored health insurance, and have a total household income of less than 200% of the federal poverty level. The plan offers a high-deductible ($1,100) basic commercial health benefits plan. To cover the deductible, the program offers participants a POWER Account valued at $1,100 to pay for initial medical costs. Contributions to the account are made by the state and each participant (based on a sliding scale and no more than five percent of his or her gross family income).

The program also provides coverage for preventive services up to $500 per year at no cost to the participant. If preventive services exceed this $500 limit, participants can use their POWER Account funds. Co-pays are required for emergency services only; however, the co-pay is returned if the service was deemed a true emergency by prudent layperson standards.

HIP covers a wide range of services, including physician services, prescriptions, diagnostic exams, home health services, outpatient hospital, inpatient hospital, hospice, preventive services, family planning and case and disease management. Mental health coverage is also included and is similar to coverage for physical health. It includes substance abuse treatment, inpatient and outpatient mental health services, and prescription drugs. The program is funded by an increase in the cigarette tax and by shifting some funds from hospitals that provide a disproportionate share of Medicaid and indigent care. At the time the legislation was passed, it was estimated that these new revenues would be sufficient to cover approximately 134,000 uninsured individuals across Indiana.

The HIP was implemented in January 2008, and by May 1, 2008, state officials reported that they had received 40,857 applications of which 13,538 had been approved.46 Within Central Indiana, the largest number of applications came from Marion County (4,009), followed by Hamilton (877), Johnson (789), Morgan (628), Hendricks (596), Hancock (422), Shelby (313), and Boone (246) counties. Marion county also had the most approved applications (995), followed by Hamilton (307), Johnson (284), Morgan (263), Hendricks (207), Hancock (155), Shelby (112), and Boone (79) counties.47

While it is still too early to know the potential effectiveness of the program in reducing the numbers of uninsured in Central Indiana, these early data suggest a significant demand for coverage expansion programs such as HIP. The program, however, contains innovative market-driven features—in particular the POWER Accounts, a type of health savings account, and the reliance on for-profit insurance carriers to administer the program—which have not been tried in other states. Consequently, critics of the program raise questions about whether the principles of using a market-based approach and emphasizing “personal responsibility” in health care decision-making are appropriately balanced to ensure better health care for low-income Hoosiers in a cost effective way.48,49
FACTORS AFFECTING CURRENT CONDITIONS

Because health insurance generally is tied to employment in the United States, macroeconomic cycles and changes in the employer-sponsored health insurance markets are the principal factors that affect the numbers of uninsured and underinsured individuals in Indiana and the rest of the country. Several studies have found a strong relationship between unemployment rates and the number of uninsured people.

In a recent study, the Kaiser Commission on Medicaid and the Uninsured estimated that a single percentage point rise in the unemployment rate leads to an increase of about 1.1 million in the number of people uninsured and one million more people enrolling in Medicaid and SCHIP.\(^\text{50}\) Cawley and Simon estimated that nearly 984,000 Americans lost health insurance due to the 2001 recession.\(^\text{51}\) More important, they found that the increase in unemployment reduced the likelihood of having health insurance most among adult men, noting that public programs, like Medicaid and SCHIP, tend to protect women and children from becoming uninsured. Similarly, other research indicates that individuals who have less education are more likely to lose their employer-sponsored health insurance and switch to Medicaid when the economy worsens and unemployment rises.\(^\text{52}\)

In the past when manufacturing dominated the state’s economy, Indiana enjoyed relatively low numbers of uninsured because a large portion of the population was protected by employer-sponsored health insurance. However, as noted above, Indiana has experienced a four percent drop in the population with employer-sponsored insurance over the past eight years (see Figure 2). This can be attributed to three trends:

- First, the Indiana economy has shifted from manufacturing to economic activities dominated by smaller firms that are less likely to offer insurance to their employees.\(^\text{53}\)
- Second, increasing costs of coverage in response to rising health care costs have meant that some employers who previously offered coverage to their employees have had to drop this benefit to remain competitive.\(^\text{54}\)
- Third, the same economic pressures have caused employers who continue to offer coverage to increase the employee contribution, resulting in lower take-ups rates by employees and their dependents (i.e., fewer employees chose to enroll in employer-sponsored health care plans).\(^\text{55}\)

In sum, macroeconomic instability and employers’ efforts to reduce the economic impact of rising health care costs on their bottom lines are contributing to the rising numbers of uninsured and underinsured.

LIKELY FUTURE DEVELOPMENTS

Most experts believe that the numbers of uninsured people across the United States will continue to rise unless significant steps are taken to restructure our employer-based health insurance system.\(^\text{56}\) As noted above, the rising costs of health insurance are leading more employers to make major changes in the health insurance coverage they offer their employees or simply to drop these benefits altogether.\(^\text{57}\) At the same time, there are signs that economic growth in the United States may be slowing significantly. This downturn or possible recession could result in higher rates of unemployment and poverty that would increase both the number of uninsured and the number of people enrolled in Medicaid in turn.

Efforts are underway in Indiana to expand coverage, primarily through HIP, but this program will reach only 15% to 17% of the estimated number of currently uninsured Hoosiers. Virtually every state in the country is struggling with similar challenges, and many have implemented or developed strategies to expand coverage, such as the Commonwealth Connector program in Massachusetts or Dirigo Health in Maine.\(^\text{58}\)

Maine’s Dirigo Choice

Maine, the first state to enact comprehensive health care reform legislation since the early 1990s, enacted the Dirigo Health Reform in 2003 with the goal of expanding coverage to the estimated 124,000 uninsured residents by 2009. Dirigo Health included two major coverage initiatives: (1) MaineCare, a Medicaid eligibility expansion for parents of children 19 and younger with incomes between 150 and 200 percent of the FPL and (2) DirigoChoice, a subsidized health insurance program that launched in 2005. Key components of Maine’s Dirigo Health Plan include: \(^\text{59}\)

- Dirigo Choice, a subsidized insurance plan administered by a private insurer, available to individuals and small businesses unable to access large group insurance;
- subsidized premiums for individuals at or below 300% of the federal poverty level; and
- financing through a unique “savings offset plan” which transfers expected cost savings of health care reform captured by providers to the fund used to support the reform effort.
The Dirigo Choice program has been hampered by financing issues. Thus far, the revenues have been less than predicted from the savings offset plan, and there have been extensive debates over how to calculate these cost savings. Although the funding mechanism was upheld after a court challenge, many supporters of the reform realize that new funding streams must be identified. In addition, the Maine experience highlights some of the challenges associated with a voluntary approach to insurance expansions: the program has faced challenges with both risk selection (most people enrolling have qualified for subsidies) and crowd-out of more expensive employer-based insurance.60

Massachusetts’ Commonwealth Health Insurance Connector

Massachusetts was the first state to issue a mandate for all of its citizens to have health insurance. Key components of the Massachusetts plan include:

- Enactment of an individual mandate - individuals who fail to enroll in a plan will lose their personal tax exemption in the first year, and may incur a fine up to 50% of the lowest cost insurance product that person can afford in subsequent years;
- Enactment of an employer mandate for employers with 11 or more employees;
- Funding of sliding-scale subsidies to individuals with incomes up to 300% FPL (or $30,630 for an individual) who do not qualify for Medicaid, Medicare or Veterans Administration benefits;
- Creation of the Commonwealth Health Insurance Connector to facilitate small employers’ and individuals’ efforts to purchase insurance from one of several state-approved insurance plans; and
- Adoption of insurance market reforms that merged the individual and small-group insurance markets to reduce selection effects in insurance.

The implementation of the Massachusetts plan has not been without problems. As of December 2007, roughly 160,000 previously uninsured residents had acquired coverage. However, the premiums required for the minimum benefit package have been higher than originally estimated, and many “near-poor” families have been exempted from the mandate to alleviate the financial hardship of compliance. The Massachusetts experience highlights the conflict between affordability and adequacy of coverage.

The prospects for additional coverage expansion initiatives in Central Indiana are unclear. The debate over the Healthy Indiana Plan was intense. While there is growing consensus that an approach is needed to reduce the numbers of uninsured people and achieve truly universal coverage, the best strategy to accomplish this goal remains a politically challenging and elusive question.

Over the past five years, most of the debate over this issue has been concentrated at the state level. However, health care has also become a major issue at the national level with various proposals for expanding coverage. While it remains to be seen whether there will be sufficient political support to take action at the federal level, the growing pressure at both the federal and state levels suggests that there may be an opportunity to make fundamental changes and to ensure finally that every American has access to basic affordable health insurance.

COMMUNITY’S CAPACITY TO ADDRESS CURRENT AND FUTURE CONDITIONS/RECOMMENDATIONS

The scope and nature of the challenges related to financing access to health care are large and complex. However, there are some actions that local communities can take to help address the health care needs of Central Indiana’s uninsured and underinsured residents:
<table>
<thead>
<tr>
<th>Where We Should Be</th>
<th>Priority</th>
<th>How To Get There</th>
<th>Financial Resources Requirements/Implications</th>
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<tbody>
<tr>
<td>There is adequate public funding to ensure access to quality physical health,</td>
<td>Critical</td>
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<td>mental health, and substance abuse and addictions services for all who cannot</td>
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<td>afford to access healthcare through private means.</td>
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<td>Safety net providers are financially stable and have the ability to respond</td>
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<td>adequately to changes in funding, payer &amp; services mixes, demand for services</td>
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<td>and other challenges.</td>
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<td>Existing community health centers have financial resources sufficient to expand</td>
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<td>their services and qualify as “federally-qualified community health centers,”</td>
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<td>thus enabling their access to additional federal funds.</td>
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<td>All eligible persons are enrolled in the subsidized health care plans and</td>
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<td>programs for which they qualify and can afford.</td>
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<tr>
<td>Where We Should Be</td>
<td>Priority</td>
<td>How To Get There</td>
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<td>Public Policy Advocacy</td>
<td>Community Education</td>
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<td>All people have equal rates of access to care and receive best practice standards of care at equal rates.</td>
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<tr>
<td>State and local public policy supports the formation of regional health insurance pools to help make employer-sponsored health insurance more affordable.</td>
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<tr>
<td>There are adequate numbers of bilingual providers and culturally competent staff to meet the need.</td>
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<tr>
<td>Increased collaboration among agencies makes comprehensive services more available.</td>
<td>Desirable</td>
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<tr>
<td>Community-based organizations are active partners in prevention efforts.</td>
<td>Desirable</td>
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<tr>
<td>Clients have access to affordable transportation and childcare services that enables health care access.</td>
<td>Desirable</td>
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</tbody>
</table>
Endnotes

1 Holmes A, Wright E. The High and Rising Tide of Healthcare Costs in Indiana. Indianapolis, IN: Indiana Healthcare Reform Faculty Study Group; 2008.

2 Ibid.

3 Ibid.


7 Henry J. Kaiser Family Foundation.

8 Holmes A, Seward P, Wright E.

9 Henry J. Kaiser Family Foundation.

10 Holmes A, Seward P, Wright E.


13 Families USA. Dying for Coverage: Families USA; April 2008.


16 Sered S, Fernandopulle R.

17 Families USA.


19 Trinity M, Martinez-Vidal E, Friedenzohn I, Folsom A, Cox B.

20 Fleming-Moran, Millicent. Marion County Health and Hospital Corporation. Email communication. May 23, 2008.


23 Step 1: Multiply 2006 U.S. Census adult population estimates by the BRFSS 2006 adult uninsured rate of 14.8% for the 10 county Indianapolis-MSA. Step 2: Sum the uninsured population totals for each county to achieve total uninsured population for MSA. Step 3: Scale the U.S. Census 2000, model-based small area health insurance estimates for counties and states, to achieve 100% distribution of 2006 adult population total over 10-county MSA. Step 4: Multiply scaled percentages for each county by total MSA uninsured population.

24 The entire 10-county Indianapolis MSA was included in the estimate to achieve proper scaling.

25 Step 1: Multiply 2006 U.S. Census adult population estimates by the BRFSS 2006 child uninsured rate of 9.1% for the 10 county Indianapolis-MSA. Step 2: Sum the uninsured population totals for each county to achieve total uninsured population for MSA. Step 3: Scale the U.S. Census 2000, model-based small area health insurance estimates for counties and states, to achieve 100% distribution of 2006 childhood population total over 10-county MSA. Step 4: Multiply scaled percentages for each county by total MSA uninsured population.

26 The entire 10-county Indianapolis MSA was included in the estimate to achieve proper scaling.


28 Ibid.


30 Centers for Disease Control and Prevention. Calculation of percentage of participants responding affirmatively to both BFRSS question 3.1 and BFRSS question 3.3.


36 Ibid.

37 Ibid.

38 Trinity M, Martinez-Vidal E, Friedenzohn I, Folsom A, Cox B.


42 Fleming-Moran, Millicent.


47 Ibid.


57 Consumer Union.

58 Trinity M, Martinez-Vidal E, Friedenzohn I, Folsom A, Cox B.

59 Ibid.

60 Lipson DJ, Verdier JM, Quincy L. Leading the way? Maine’s initial experience in expanding coverage through Dirigo health reforms. 2007.
The Health chapter is generously sponsored by Kroger Pharmacy.
INTRODUCTION

Asthma is a disease that affects the lungs. When a person has asthma, the inside walls of the airways of the lungs are inflamed, making them more sensitive and more reactive than the airways of a person who does not have asthma. The airways react more strongly to triggers, including dust mites, cockroaches, animal dander, mold, pollen, tobacco smoke and exercise. Triggers vary from person to person. Asthma commonly causes repeated episodes of wheezing, breathlessness, chest tightness, and nighttime or early morning episodes of coughing. Asthma is a serious and growing health problem. It is the most common long-term disease of children but affects adults as well. In 2005, the Centers for Disease Control and Prevention (CDC) estimated that:

- 32.6 million people had been diagnosed with asthma during their lifetime;
- 22.2 million people currently had asthma (6.5 million of these were children); and
- 12.2 million people had experienced an asthma attack in the past year.

During 2004, asthma accounted nationally for:

- 13.6 million doctor visits;
- one million hospital outpatient visits;
- 1.8 million emergency department visits; and
- 3,816 deaths.

In 2002 total asthma-related healthcare costs were estimated at $14 billion annually. There are a number of indirect costs related to asthma which include days missed from work or school, caregiver costs, travel and waiting time, early retirement due to disability and premature death.\(^3\)

Because of the significant numbers of children and adults who suffer from asthma and the associated personal and financial burdens associated with the disease, the U.S. Department of Health and Human Services (DHHS) has outlined several asthma-related prevention goals in its Healthy People 2010 initiative. The goals for which data are available at the state and local level include:\(^4\)

- Reduce asthma deaths to one per million for children under five; one per million for children 5-14 years of age; two per million for adolescents and adults 15-34 years of age; nine per million for adults 35-64 and 60 per million for adults 65 years and older.
- Reduce hospitalizations for asthma to 25 per 10,000 for children under 5; 7.7 per 10,000 for people 5 to 64; and 11 per 10,000 for adults age 65 years and older.
- Reduce ER visits for asthma to 80 per 10,000 for children under 5; 50 per 10,000 for children and adults 5 to 64 and 15 per 10,000 for adults age 65 years and older.
CURRENT CONDITIONS

Adult Prevalence

The lifetime prevalence of asthma in the United States, Indiana, and Central Indiana increased slightly from 2002 through 2006. In 2006, 13% of the adult U.S. population, 12.7% of Indiana adults, and 13% of adults in Central Indiana reported being told by a doctor at some point in their lives that they suffered from asthma. The percent of adults who currently report having asthma is similar in the U.S., Indiana and Central Indiana with percentages of 8.5%, 8.4% and 7.7%, respectively.5,6

Figure 1: Percent of Adults Who Ever Had Asthma

Racial Differences

From 2002 through 2005, the percentage of Black adults in Central Indiana reporting ever receiving a diagnosis of asthma was higher than the percentage of White adults who had ever received a diagnosis of asthma. In 2006, the percentage of White adults who ever had asthma was slightly higher (13.9%) than Black adults (11.7%).7

Gender Differences

Across the years for which data were available, a higher percentage of Central Indiana adult women reported having been told they had asthma than did adult men in Central Indiana. In 2006, an estimated 13.7% of women in Central Indiana had a diagnosis of asthma during their lifetime, while an estimated 12.8% of Central Indiana men had ever received an asthma diagnosis.8

Child and Adolescent Prevalence

Limited information exists on the prevalence of asthma in children and adolescents at the state and local levels. During 2006, the CDC estimated the lifetime prevalence of asthma in ninth through 12th grade students in Indiana to be 22%. This is significantly higher than the national prevalence estimate of 17.1%.9 A study completed in 2003 by the Indiana State Department of Health’s (ISDH) Division of Maternal and Child Health estimated the lifetime prevalence of asthma in Indiana to be approximately 10.4% for children and adolescents 17 years of age or younger. The Division of Maternal and Child Health also computed prevalence estimates for the counties served by UWCI. These estimates indicated that lifetime asthma rates were highest in Boone County (12.4%) and lowest in Marion County (9.6%).10

Figure 2: Asthma Prevalence for Children 0-17 by County, 2003
Racial and Gender Differences

Information on racial and gender differences in the prevalence of asthma is only available for Marion County. In a recent study completed by the Indiana University School of Medicine, the overall prevalence rate of asthma for children between the ages of five and 18 in Marion County was estimated at approximately 21%. Generally, boys had higher rates of lifetime asthma than girls did, and Blacks had higher rates than Whites did. The group with the highest rate of lifetime asthma was Black boys (27.4%), followed by White boys (23.2%), Black girls (18.5%) and White girls (14.6%).

Asthma and Overweight/Obesity

Nationally, individuals who are overweight or obese have higher lifetime rates of asthma than do people of normal weight. The relationship between being overweight or obese and asthma is not clear. Extra weight could be a risk factor for developing asthma or people with asthma may become overweight or obese due to an inability to take part in regular physical exercise. In Central Indiana, a similar relationship exists between lifetime prevalence of asthma and being overweight or obese. In 2006, it was estimated that 13.8% of overweight adults and 17.0% of obese adults had a lifetime diagnosis of asthma compared to 10.4% of normal weight adults. In Marion County, overweight boys had a lifetime asthma prevalence of 31.9% compared to 23.0% for normal weight boys. Girls in Marion County who were overweight had a lifetime asthma prevalence rate of 21.3% compared to 12.6% for normal weight girls.

Hospital Visits

Asthma hospitalization data can be used to look at the severity of asthma. Hospitalizations due to asthma are generally considered preventable if asthma is controlled. Proper disease management can be achieved with medications, reduced exposure to triggers, and regular outpatient visits to health care providers. These services also tend to be less costly than hospitalizations. Asthma hospitalizations are very costly.

In 2005, there were 8,302 hospitalizations due to asthma in Indiana. The age-adjusted rate per 10,000 Indiana residents increased from 12.8 in 2002 to 13.2 in 2005. Indiana's hospitalization rate is lower than the national rate. Both rates have been relatively steady from 2002 to 2005.
Emergency Department Visits

Emergency department visits are another measure of the severity of asthma. Most emergency department visits are preventable with proper disease management. In 2005, there were 24,320 emergency department visits for asthma in Indiana. The age-adjusted asthma emergency department rate per 10,000 Indiana residents was 39.2. Within the UWCI service area, Marion County had the highest emergency department visit rate (53.2 per 10,000 residents), and Boone County had the lowest (9.6 per 10,000 residents).17

Asthma-Related Mortality

County-level asthma-related mortality rates are not available. As a state, the asthma-related mortality rate in 2005 was 13.0 per 1,000,000 Indiana residents. In 2005, Indiana women (16.4 deaths per 1,000,000 Indiana residents) were more likely to die from asthma than Indiana men (8.1 deaths per 1,000,000 Indiana residents). In 2005, out of 85 deaths due to asthma, 58 (9.8 per 1,000,000) were White and 27 (55 per 1,000,000) were Black. Indiana’s asthma mortality rate increased with age. For the period from 1999 to 2005, children 0-14 years of age had an asthma mortality rate of 3.6 per 1,000,000 compared Indiana’s adults 85 years of age and older, who had an asthma mortality rate of 137.5 per 1,000,000.18
Response Systems

- The Indiana Joint Asthma Coalition (InJAC) works to reduce the burden of asthma on people living in Indiana. InJAC includes volunteer members from federal, state and local government agencies, professional organizations, managed care plans, hospitals, schools, environmental groups, and other community-based organizations and individuals concerned with the prevention and control of asthma in Indiana. In 2002, the CDC awarded InJAC a grant to build local capacity to address asthma issues in Indiana. InJAC has developed a strategic plan for addressing asthma in the state.19
- The Asthma Alliance of Indianapolis is a coalition that provides people living with asthma with the knowledge and skills to improve their health and quality of life.20
- Smart Schools Don’t Idle Program is being implemented by schools in Marion County to help create a healthier breathing environment around schools by requiring drivers to turn off their vehicles when waiting for students.21
- Gennesaret Free Clinic provides an asthma clinic for indigent and homeless children and adults living in Marion County.
- Indiana code 20-33-8-13 allows students to carry and administer medication to themselves while in school if they suffer from a chronic condition such as asthma.22

Factors Affecting Current Conditions

According to ISDH, Indiana has not met many of the Healthy People 2010 asthma-related goals. Specifically, Indiana’s rates of asthma-related hospitalizations are above the goal for all age groups, Indiana’s rates of asthma-related emergency department visits are above the goal for individuals 5 years of age and older, and Indiana’s death rates from asthma are higher than the goal for all age groups except those 65 years of age and older.23 Unfortunately, data on how well Central Indiana is doing on these indicators is lacking. Within Central Indiana, the lifetime prevalence of adult asthma cases has remained stable since 2002. Many factors could be affecting the current conditions surrounding asthma. Public health experts have speculated that individuals with lower incomes often live in older dwellings and in neighborhoods that may be more likely to contain mold, dust, air pollution and other contaminants that can increase the frequency of asthma attacks in affected individuals. Research on the relationship between asthma prevalence and neighborhood housing and socioeconomic factors in Marion County, however, did not find a relationship between location or age of housing and asthma prevalence.24 The impact of one’s housing and neighborhood may be a better predictor of attack frequency and hospital or emergency department visits, items not addressed in this study.
Key Clinical Activities for Quality Asthma Care:

- Establish asthma diagnosis.
- Classify severity of asthma.
- Schedule routine follow-up care.
- Assess for referral to specialty care.
- Recommend measures to control asthma triggers.
- Treat or prevent all co-morbid conditions.
- Prescribe medications according to severity.
- Monitor use of inhaled medications which dilate the bronchial tubes.
- Develop a written asthma management plan.
- Provide routine education on patient self-management.

Individuals with lower incomes may have difficulty purchasing necessary medications and other items that can help reduce or prevent asthma attacks such as mite-resistant mattresses and pillow covers, and air filters. As with any chronic condition, people with asthma need to engage in a consistent pattern of preventative medical care. Lower-income individuals may be challenged to do so because of difficulties finding transportation, a lack of insurance, or difficulties in finding providers that serve lower-income patients.

Level of education may also be a significant factor affecting asthma in Central Indiana. ISDH determined that individuals with a lower level of education were more likely to report currently having asthma. Individuals with less education may have difficulty understanding the connection between their environment and asthma-related problems or may have difficulty following the potentially complex self-care routines necessary to control their disease.

Smoking rates may also be affecting Central Indiana’s asthma status. As indicated in the section on tobacco use, Indiana ranks fifth in cigarette smoking. It is likely that many individuals with asthma are living in environments with smokers. Because cigarette smoke is a significant trigger of asthma attacks, regularly being exposed to cigarette smoke could lead to a higher number of attacks for affected individuals and subsequently more hospital and emergency department visits.

To assist students who may have asthma, Indiana has implemented a number of policies applicable to all school systems.

- For students with asthma, school districts are required to include in the student’s individualized education plan statements of related services, other health impairments, and/or health services the student needs or is being provided under the Individual Disabilities Education Act to satisfy unique academic needs.
- Students with asthma are required by law to have immediate access to any medication they need for treatment. Health professionals are required to administer this medication when needed. Students are also allowed to self-administer medication when needed.
- Indiana requires all school systems to implement integrated pest management programs that include procedural guidelines for pesticide application, education of building occupations, and inspection and monitoring of pesticide applications.

Although the policies in place may help students with asthma, Indiana still does not require schools to educate students about asthma. Indiana also does not have a statewide policy regarding the use of cigarettes in and around schools. Indiana also does not require indoor air quality tests for schools unless a complaint is made, although guidance regarding air quality and testing is available to interested schools or school systems. Policy makers have tried on several occasions to pass legislation requiring school-based asthma screening; however, this legislation has never passed.

Likely Future Developments

Overall, asthma rates have changed little at both the state and local levels. If the local and state-level trends remain stable, Central Indiana will see little change in the number of individuals with asthma. Additionally, hospitals and emergency departments in Central Indiana can expect to see little change in the numbers of asthmatics coming for treatment.
RECOMMENDATIONS

A Strategic Plan for Addressing Asthma in Indiana^29

The Indiana Joint Asthma Coalition has developed a strategic plan to address asthma in Indiana. The plan recognizes that a multi-pronged approach is necessary to reduce the health and economic consequences of asthma on Indiana citizens. The goals of the strategic plan are to:

Develop and implement a comprehensive asthma surveillance plan which will satisfy both state and federal data needs, provide timely access to asthma-related data, and use standard data definitions allowing for comparisons across data from different agencies.

Raise public awareness of asthma as a serious chronic disease and improve the knowledge and skills of patients regarding the detection, treatment and control of asthma, particularly among high-risk populations.

Assist schools and childcare facilities in raising awareness about asthma for staff and students and to enhance management and support systems so that facilities are well equipped to handle children with asthma and provide an asthma safe and friendly environment.

Reduce environmental hazards that contribute to asthma in homes, rental properties, commercial buildings, schools, workplaces, and outdoor environments.

Encourage healthcare providers to use best practice guidelines, provide patients with education and asthma action plans, work to improve healthcare coverage and benefits for asthma, encourage health care providers to obtain asthma-related education and promote the concept of a medical home.
In addition to support for the Indiana Joint Asthma Coalition’s strategic plan to address asthma in Indiana, the following are recommendations for improving the management of asthma in Indiana:

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<td>Public Policy Advocacy</td>
<td>Community Education</td>
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<tr>
<td>State and local policies prohibit cigarette use around schools, require certain levels of air quality in school buildings and require asthma screening for children in high risk categories.</td>
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<tr>
<td>Agencies and community groups that work with individuals at high risk for asthma (e.g., women, children, Blacks, the poor) increase asthma education programs at convenient, accessible locations.</td>
<td>Important</td>
<td></td>
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</tbody>
</table>
Endnotes


2 Ibid.


7 Ibid.

8 Ibid.

9 Centers for Disease Control and Prevention. Asthma.


14 Saha C, Riner ME, Liu G.

15 Indiana State Department of Health. The Burden of Asthma in Indiana: Second Edition

16 Ibid.

17 Ibid.

18 Ibid.


24 Saha C, Riner ME, Liu G.


28 Ibid.

29 Indiana State Department of Health. Indiana Joint Asthma Coalition.

United Way of Central Indiana publishes the 2008 Community Assessment and provides it to the community as a credible source of information and insight for the greater Central Indiana region.
INTRODUCTION

Dental caries, resulting in tooth decay and cavities, is the single most common chronic disease of childhood, occurring five to eight times as frequently as asthma, the second most common chronic disease in children. Despite the reduction in cases of caries in recent years, more than half of all children have caries by the second grade. And, by the time students finish high school, about 80% have caries. Unless arrested early, caries is irreversible.  

Good dental health is essential not only for children but for adults as well. Without proper dental care, adults also run the risk of caries, periodontal disease, and eventually tooth loss. Adults with chronic health conditions such as uncontrolled diabetes, those who smoke cigarettes, and those under chronic stress are at increased risk for dental problems. Recent research has also shown a link between periodontal disease in adults and low birth weight and premature births in infants, and between periodontal disease and heart disease and stroke in adults. The American Journal of Public Health reports that, “Recent data indicate that periodontal diseases are associated with chronic diseases such as cardiovascular disease, cerebrovascular diseases and diabetes...Oral diseases and dysfunction can be extremely painful, and they have an acute impact on quality of life, affecting chewing, eating, speaking and social interactions.”

While it is still unclear how these conditions are related, what is clear is that good dental health is an essential component of overall physical health. In order to emphasize the importance of dental health, the Department of Health and Human Services has outlined a number of dental-health-related goals in its health prevention initiative Healthy People 2010. The most relevant goals to the UWCI service area include: 

- Reducing the proportion of young children (ages 2 to 4) with dental caries in their primary teeth to 11%;
- Reducing the proportion of children (ages 6 to 8) with dental caries in their primary and permanent teeth to 42%;
- Reducing the proportion of adolescents with dental caries in their permanent teeth to 51%;
- Reducing the proportion of young children (ages 2 to 4) with untreated dental decay in their primary teeth to nine percent;
- Reducing the proportion of children (ages 6 to 8) with untreated dental decay in primary and permanent teeth to 21%;
- Reducing the proportion of adolescents with untreated dental decay in their permanent teeth to 15%;
- Reducing the proportion of adults with untreated dental decay to 15%;
• Increasing the proportion of adults who have never had a permanent tooth extracted because of dental caries or periodontal disease to 42%;
• Reducing the proportion of older adults who have had all their natural teeth extracted to 20%; and
• Reducing gingivitis in adults to 41% and destructive periodontal disease in adults to 14%.

CURRENT CONDITIONS

A thorough examination of dental health in Central Indiana (Marion County, and its surrounding counties: Boone, Hamilton, Hancock, Hendricks, Johnson, Morgan, Shelby) requires the proper perspective. As the only major urban center found in the state, Central Indiana has specific needs that differ greatly from the state as a whole. As a predominantly rural state, the key problem with oral health in Indiana is the uneven distribution of oral health care providers. Yet, Central Indiana has the highest concentration of dentists to population in the state. This unique situation merits an investigation into the needs for Central Indiana separate from what can be gleaned by using statewide data.

Unfortunately, current information on dental health specific to Central Indiana is scarce. The last collection of data was the Indiana Oral Health Survey, conducted in 1993. The fact that there is no central organization actively collecting data and monitoring the current status of Central Indiana’s dental health makes a thorough understanding of the area’s dental health and dental-health-related behaviors difficult.

Central Indiana’s Oral Health Compared to State and National Data

Data from the 2006 Behavioral Risk Factor Surveillance Survey (BRFSS) show that Central Indiana’s oral health is worse than state and national averages. The BRFSS used three questions that are strong indicators of chronic dental illness. Central Indiana had 23.4% of adults aged 65+ who have had all their natural teeth extracted, while Indiana had 21.2%, and the U.S. had 19.3%. The survey also collected data on the percentage of adults that have had any permanent teeth extracted. In Central Indiana, 57.4% responded yes, compared to 47.1% in Indiana, and 43.9% nationally. Finally, the survey asked how many people had visited a dentist or dental clinic within the past year for any reason. In Central Indiana, 68.9% had received dental care in the past year, in contrast to 68% of people in Indiana and 70.3% nationally.

Data from the 2002, 2004 and 2006 BRFSS indicate that there is a trend for adult dental health to be declining. In 2006, 10% fewer adults reported having had their teeth cleaned in the past 12 months. Similarly, there was a 10% increase in the number of adults reporting having had at least one permanent tooth extracted due to dental decay or periodontal disease.4,5

Figure 1: Percent of Central Indiana Residents Who Have Had Their Teeth Cleaned in Past 12 Months
Adult oral health behaviors vary by race in the Central Indiana area. During 2006, a higher percentage of White Central Indiana adults (71.3%) reported having been to a dentist or dental clinic in the past year than Black adults (56.6%). Similarly, more White adults (71.5%) than Black adults (55.2%) reported having had their teeth cleaned in the past year. A higher percentage of Black adult Hoosiers (37.7%) in Central Indiana said they had one to five permanent teeth removed than did White adult Hoosiers (29.4%). Adults in Central Indiana over the age of 65 who had all their permanent teeth removed were more likely to be Black (26.7%) than White (20.2%).

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**Figure 2: Percent of Central Indiana Residents Who Have Had Any Permanent Teeth Extracted**

**Figure 3: Percent of Central Indiana Residents Age 65+ With All Permanent Teeth Extracted**
Very little information exists on the oral health of children and adolescents for either the state or UWCI service area. The data that do exist are specific to Marion County and come from a survey completed in 2002 by the Indiana University School of Dentistry. The survey examined the teeth of 1,236 6- to 8-year-old children and 14- to 15-year-old adolescents. Parents of the screened children and adolescents provided information regarding their child’s general oral health practices. The conclusions of the study are as follows:7

- The prevalence of under-treated dental decay in children 6-8 years of age was 48%.
- The prevalence of caries in children 6-8 years of age was 64%.
- 73% of children 6-8 years of age had seen a dentist in the past 12 months.
- The prevalence of untreated dental decay in 14-15-year-old adolescents was 68%.
- The prevalence of caries in 14-15-year-old adolescents was 41%.
- 72% of adolescents 14-15 years of age had seen a dentist in the past 12 months.
- The percentage of 6-8 year old White, Black, and Hispanic children with untreated dental decay was similar: 49%, 44% and 53%, respectively. The differences among the groups were not statistically significant.

Based on the available data on dental health for adults and young people in Central Indiana, the status of only a few of the Healthy People 2010 goals can be evaluated. Currently, the Central Indiana area does not meet the Healthy People 2010 criteria for the prevalence of untreated dental decay in both children and adolescents, prevalence of caries in children, the proportion of adults who have had a tooth extracted due to caries or periodontal disease, and the proportion of adults over 65 who have had all their teeth extracted. Adult Whites in Central Indiana are closer to meeting the Healthy People 2010 goals than adult Blacks.8

Dental Health and Proper Nutrition

Having a healthy, full set of teeth is an important part of good nutrition. Healthy teeth allow people to properly chew and eat the wide variety of foods necessary for a good diet. People who suffer from periodontal disease and have painful and loose teeth, or who lose teeth as the result of poor dental habits, often have trouble eating healthy and nutritious foods.7 Studies on the eating habits of older adults who have lost some or all of their teeth found that these individuals typically ate fewer raw fruits and vegetables, ate fewer high-fiber foods, and ate less protein.10,11 Fruits, vegetables and protein are all food items necessary for a complete diet. To help people with dental problems such as tooth loss or who wear dentures eat a complete range of foods, healthcare providers have made the following suggestions:12

- Substitute cottage cheese and yogurt for hard cheeses in order to improve intake of dairy products.
- Substitute fish, eggs, legumes and tofu for hard to chew meats, and/or grind or puree meat products for easier chewing and swallowing.
- Use well cooked or canned fruits and vegetables to ensure that these foods can be more easily consumed.
- Avoid breads with hard crusts and instead use pasta, rice and cooked cereals as sources of fiber, grains and carbohydrates.

Workforce

Central Indiana has a very high ratio of dentists to population in comparison to the state. Of the 92 counties in Indiana, Central Indiana has five of the top nine ratios of dentists to population (Hamilton 1:99; Marion 1:1370; Boone 1:1,407; Johnson 1:1,605; and Hendricks 1:1677).13 In contrast to these high ratios, the remaining counties in Central Indiana have a low to average density of dentists to population for the state (Shelby 1:3,979; Morgan 1:2,181; and Hancock 1:2,177). This shortage of dentists could lead to poor dental health in these counties.
Other Vulnerable Populations

In addition to the special populations previously mentioned, other vulnerable populations include:

- Residents of long-term care facilities;
- Homebound individuals;
- People who are homeless;
- People with HIV/AIDS;
- Children and adults with special health care needs;
- Immigrants; and
- Refugees.

RESPONSE SYSTEMS

Services for Low-Income People

Low-income people in Central Indiana have options when seeking dental treatment. Of the 19 state-funded community health centers in Indiana, 10 are located in Indianapolis. As a whole, Marion County offers many services from a diverse group of providers. There are at least 28 providers serving the low-income population in traditional dentist offices, homeless shelters, mobile clinics and schools. Some offer general care, others focus on a specific demographic, including children, women, and the homeless. One such program is “Give Kids A Smile,” coordinated by the Indiana Dental Association. Over the past four years, dentists across the state have provided underprivileged children with $1.1 million worth of care.

In the counties surrounding Marion County, only Hendricks and Hamilton Counties have dental care clinics for low-income residents. There are also informal care operations and pro-bono services provided by individual dentists that are hard to identify. For example in Boone County, a group of dentists provides care to in-need schoolchildren on a rotational basis. Although there are many opportunities to receive care in Marion County, many of the people in the surrounding counties might not be able to access these programs.

Education and Prevention Dental Health Programs

Several public and private programs exist to improve dental health in Central Indiana. The “Born to Smile” program was developed by the Indiana Dental Association to promote good dental health from an early age. Parents can bring 12-month-old children to a dentist for a free visit. Fluoride programs, which greatly reduce tooth decay, exist in each of the Central Indiana counties.

FACTORS INFLUENCING CURRENT CONDITIONS

Many factors affect Central Indiana’s dental health. On a national and local level, the number of practicing dentists has been in decline since 1990, primarily due to the large number of dentists reaching retirement age. The rate at which dentists are retiring is occurring far more quickly than the rate at which new dentists can be trained to enter the field. Although interest in dentistry is quite high, the number of available openings each year in dental schools is limited. As an example, in 2007, the IU School of Dentistry had approximately 1,800 qualified applicants for their program and only 100 openings for first-year students. This trend causes a shortage in providers, especially in rural areas and the lack of competition increases costs of care. Another major factor detracting from public health is the lack of dental insurance. Without insurance, people wait longer to receive care causing irreparable damage to their dental health. Decreasing insurance can be traced back to the shift in Indiana’s economy from a manufacturing economy, with large employers who could easily pool risk and negotiate low rates to small service-type jobs. Another factor is the increase in insurance costs. Since 2003, insurance rates have risen by double digits each year.

Whether or not a family has health insurance and the type of health insurance they have can affect a child’s dental health. The following differences were noted in the dental health of Marion County children and adolescents based on the presence or absence of health insurance and the type of health insurance their family had:

- Children enrolled in Medicaid/Hoosier Healthwise were more likely to have had caries experience and to have untreated decay than children with private dental insurance.
- Twenty-five percent of children enrolled in Medicaid/Hoosier Healthwise were more likely to have sealants than the 16% of children with private dental insurance.
• Children with Medicaid/Hoosier Healthwise coverage were less likely than children with private insurance to have visited a dentist in the past year.
• Among the children ages 6-8, 74% of those with Medicaid/Hoosier Healthwise had a dental visit within the past year compared with 81% of those with private insurance and 56% of those who reported no or unknown insurance coverage.
• Among the children 6-8 years old, 10% of those with Medicaid, eight percent of those with private insurance and 23% of those with unknown coverage never had a dental visit. Among the 15-year-old adolescents, three percent of those with Medicaid/Hoosier Healthwise, four percent of those with private insurance and 11% of those with unknown or no coverage had never seen a dentist.

The following barriers to adequate dental care for children, adolescents and adults throughout the United States were outlined by the American Dental Association:20

• The dental components in Medicaid and SCHIP, which are supposed to provide health care to disadvantaged Americans, are chronically underfunded.
• Federal law mandates that Medicaid cover basic preventive and restorative services. But many state programs fail to deliver care to even half of eligible children.
• Adult dental coverage through public health programs is even worse. Many states simply do not provide it.
• Patients covered under public programs still face hurdles such as transportation and difficulty missing work.
• Too many Americans lack a basic understanding of preventive oral health including brushing, flossing, eating a healthy diet and drinking fluoridated water.
• About one-third of public water systems are not fluoridated, yet it is the single most effective public health measure to protect against tooth decay. (As of 2002, the CDC reported that Indiana ranked 6th among all states with a public water system fluoridation rate of 95.5%. The majority of Central Indiana residents have access to fluoridated water, with small exceptions such as mobile home parks and other private communities.)

Likely Future Developments

Based on available data for adults, it appears that dental health in Central Indiana may be worsening. The decrease in the percentage of adults having annual cleanings may be because of the lack or reduction of dental health insurance benefits. Regardless of the cause, by neglecting preventive health measures like regular cleanings, adults put themselves at risk for higher dental-health-related expenditures in the future.

Because of the lack of any regularly collected data on the dental health of children and adolescents, it is unclear whether the dental health of young people in Central Indiana is declining, improving, or remaining stable. Additionally, because many of the services geared toward individuals who live at or below the poverty level are within Marion County and serve only Marion County residents, children and adults in outlying areas may continue to be underserved and could potentially experience higher rates of dental health issues.
Community’s Capacity to Address Present and Future Conditions

Although many services exist within the Marion County area to address the dental health needs of children, adolescents and adults, individuals living in this area are far from meeting the goals set in Healthy People 2010. Following are recommendations related to improving dental health for all Central Indiana Residents:

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<td></td>
<td></td>
<td>Public Policy Advocacy</td>
<td>Community Education</td>
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<tr>
<td>There is effective marketing of the importance and availability of youth and adult dental services, especially to Blacks and individuals who have little or no health insurance.</td>
<td>Critical</td>
<td></td>
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<tr>
<td>Targeted, culturally appropriate education about the importance of oral health and good oral health habits help expecting and new parents establish life-long oral health habits in their children.</td>
<td>Critical</td>
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<tr>
<td>More effective dental-health-related surveillance systems provide accurate data related to dental health.</td>
<td>Important</td>
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<tr>
<td>Organizations in counties outside of Marion County work with state-level agencies such as the Indiana State Department of Health to help establish low-cost or sliding-scale dental services in more rural, less populated areas.</td>
<td>Important</td>
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<tr>
<td>There is increased availability of low cost or free preventive dental screening and cleaning services for individuals over 18.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Endnotes


6 Ibid.


12 Henshaw MM, Calabrese JM.


14 Ibid.


16 Yoder KM.


18 Yoder KM. Decline of Practicing Dentists; (personal communication, 2008).

19 Yoder KM, Miller JR, Zero DT, Eckert GJ, Manz M.


United Way of Central Indiana publishes the 2008 Community Assessment and provides it to the community as a credible source of information and insight for the greater Central Indiana region.
Health — Diabetes

The Health chapter is generously sponsored by Kroger Pharmacy.
INTRODUCTION

Diabetes is a group of diseases characterized by high levels of blood glucose resulting from defects in insulin production, insulin action or both. There are several types of diabetes; however, the two most common are Type 1 diabetes and Type 2 diabetes. Type 1 diabetes develops when the body's immune system destroys pancreatic beta cells, the only cells in the body that produce insulin. In order to survive, people with Type 1 diabetes must rely on daily injections or a pump to deliver insulin to their blood streams. Type 1 diabetes typically starts in childhood.

Type 2 diabetes usually affects adults. At the same time, Type 2 diabetes, formerly known as adult-onset diabetes, increasingly is being reported among U.S. children and adolescents. In fact, the percentage of children with newly diagnosed Type 2 diabetes has increased from less than five percent before 1994 to 30 – 50% in subsequent years.1

Type 2 diabetes normally begins as a condition known as insulin resistance, a disorder in which cells do not use insulin properly. Over time, as the body's need for insulin rises, the pancreas loses its ability to produce it. Type 2 diabetes is usually associated with older age, obesity, family history of diabetes, history of gestational diabetes, impaired glucose metabolism, physical inactivity and race/ethnicity. Over 90% of diabetes cases diagnosed in the U.S. are Type 2 while another 5 to 10% are Type 1.

Diabetes, if left untreated, can lead to many serious health consequences, including death. Some of the most common problems associated with diabetes are:2

- Increased risk for heart disease and stroke;
- High blood pressure;
- Blindness;
- Kidney disease;
- Nervous system disease;
- Amputations;
- Dental disease;
- Complications during pregnancy; and
- Biochemical imbalances.

Because approximately 800,000 new cases of diabetes are diagnosed each year, and because diabetes ranks as the seventh leading cause of death nationally, the U.S. Department of Health and Human Services has proposed 17 diabetes-related prevention goals in its Healthy People 2010 prevention initiative. A sampling of these goals includes:3

- Reduce the overall rate of diabetes that is clinically diagnosed to 25 overall cases per 1,000 population.
- Increase the proportion of adults with diabetes whose condition has been diagnosed.
• Reduce the diabetes death rate to 45 deaths per 100,000 population.
• Reduce deaths from cardiovascular disease in persons with diabetes.
• Reduce the proportion of pregnant women with gestational diabetes.
• Increase the proportion of adults with diabetes who have an annual dilated eye examination to 75%.
• Increase the proportion of adults with diabetes who have at least an annual foot examination to 75%.
• Increase the proportion of persons with diabetes who have at least an annual dental examination to 75%.
• Increase the proportion of adults with diabetes who perform self-blood-glucose-monitoring at least once daily to 60% of adults with diabetes.

CURRENT CONDITIONS

Prevalence

Data from the Centers for Disease Control and Prevention’s (CDC) Behavior Risk Factor Surveillance Survey (BRFSS) indicate that nationally and in Indiana, the percentage of adults who report ever receiving a diagnosis of diabetes has been gradually increasing. The 2006 BRFSS indicates that 7.5% of the U.S. population and 8.1% of Indiana residents report having been told by a doctor they have diabetes. Since 2002, the prevalence of diabetes has been higher in Indiana than in the U.S. as a whole.4

The trend in diabetes prevalence within Central Indiana has been less clear. In 2002, 8.0% of Central Indiana residents had received a diagnosis of diabetes from a doctor. In 2006, this number had dropped to 7.0%. However, there have been increases and decreases in Central Indiana’s prevalence of diabetes since 2002. Overall, it appears that Central Indiana’s rate of diabetes is much more similar to the U.S. rate than to Indiana as a whole.5 Marion County is the only county for which county-level diabetes prevalence data are available.

According to a recent report by the Marion County Health Department, in 2005, 10.6% of Marion County residents were living with diabetes. The prevalence of diabetes in Marion County has typically been higher than both state and national rates from 2001 through 2005. When compared to the goals in Healthy People 2010, the Central Indiana area diabetes rate is higher than the rate desired.6,7 The age of onset in 2006 for the typical diabetic living in Central Indiana was approximately 53 years of age.8
Gender and Racial/Ethnic Differences

The prevalence rate of diabetes varies depending on race/ethnicity. Both nationally and at a state level, Blacks have a higher prevalence of diabetes than Whites. In 2006, 10% of Indiana's Black citizens said a doctor had diagnosed them with diabetes while only 8% of Indiana's White population reported a diabetes diagnosis. Data from the Central Indiana area show that the 2006 prevalence of diabetes is similar for both Blacks (10.7%) and Whites (10.1%). In general, the trend in Central Indiana seems to show that the prevalence of diabetes is gradually decreasing for Blacks and gradually increasing for Whites. Within Marion County, the prevalence of diabetes in 2005 was much higher in Black residents (15.0%) than it was in White residents, (9.3%).

In terms of gender, the over time trend in prevalence is less clear. Nationally since 2002, men have reported a higher prevalence rate of diabetes than women. Within Indiana, the percentage of men reporting a diagnosis of diabetes was higher than the percentage of women reporting a diagnosis during most years reviewed. Data for 2006, however, indicate that 8.4% of Indiana women had a diabetes diagnosis compared to 7.8% of men. The pattern in Central Indiana more closely reflected that of the state with men reporting a higher prevalence of diabetes than women reported until 2006. In 2006, women reported a higher prevalence rate (10.7%; or 107 per 1000 population) than men (8.9% or 89 per 1000 population). Data from 2005 for Marion County also show a higher percentage of women reporting diabetes (11.1% or 111 per 1000 population) than men (10.1% or 101 per 1000 population). Overall, prevalence rate in men for diabetes appears to be trending downward while the rate for women appears to be trending upward.

Diabetes-Related Deaths

In 2005, diabetes was the sixth leading cause of death in Indiana and accounted for 26.72 deaths per 100,000 Hoosiers. Of all groups in the state, Black males had the highest death rate from diabetes at 64.53 deaths per 100,000 people. Within the UWCI service area, Boone County had the highest diabetes-related death rate at 31.19 deaths per 100,000 persons while Hamilton County had the lowest rate at 13.26 deaths per 100,000 persons. The diabetes death rate for the UWCI service area is currently lower overall than what the DHHS Healthy People 2010 initiative set as the goal rate. However, at a state level, the death rate for Blacks, particularly Black men, was significantly higher than the Healthy People 2010 goal rate.

Figure 2: 2005 Diabetes Death Rate for UWCI Counties
Self-Care Activities

Many of the Healthy People 2010 goals related to diabetes focus on the level with which people engage in various prevention activities related to diabetes. Within the Central Indiana area, for people diagnosed with diabetes the prevalence of self-care activities during 2006 are as follows:

- 68% reported having taken a class in managing their diabetes.
- 40% are currently taking insulin.
- 73% are currently taking prescription pills for diabetes.
- 61% report checking their glucose levels at least once a day.
- 60% check their feet for sores on a daily basis.
- 81% reported having a health professional check their feet at least one time in the past 12 months.
- 88% had seen a health professional at least once in the past 12 months for diabetes-related concerns.
- 84% reported having their blood checked for glycosylated hemoglobin at least once in the past 12 months.
- 74% reported having an eye exam where their pupils were dilated within the past year.
- 52% reported visiting a dentist or dental hygienist in the past 12 months.
- 65% reported having a flu shot in the past 12 months.
- 57% reported having a pneumonia shot in the past 12 months.

When compared to the goals in Healthy People 2010 for which data are available, the following are goals which people with diabetes in Central Indiana appear to be meeting: measurement of glycosylated hemoglobin in the blood; having a health professional check their feet for sores; having formal diabetes education; and, monitoring blood glucose levels daily.

Diabetes-Related Healthcare Costs

In 2007, it was estimated that individuals in the U.S. with diabetes spent on average $11,744 a year on healthcare compared to $2,935 by individuals without diabetes. The Indiana State Department of Health estimated that in 2006, more than 5 billion dollars was spent on health care for people with diabetes in the state.

Response Systems

Individuals with diabetes are able to access a number of resources for information and education and include:

- **The Diabetes Prevention and Control Program (DPCP)** – The DPCP is Indiana’s statewide diabetes prevention and control initiative. Operated by the ISDH, the goal of the DPCP is to reduce the burden of diabetes in Indiana through data surveillance, health communications, health systems development, and the development and implementation of community interventions and programs.
• **ABCs of Diabetes** - The ABCs of diabetes is a diabetes self-management training program operated by the Marion County Health Department. The program is committed to providing adults with diabetes and their families with educational services and information. The program empowers individuals to achieve and maintain good health and to prevent, delay and reduce the complications that may develop from diabetes by providing the knowledge and skills needed for successful management.\(^{21}\)

• **Body and Soul** – Body and Soul is a wellness program designed for African-American churches by the National Institutes of Health, National Cancer Institute. While not a diabetes-specific program, Body and Soul encourages participating congregations to make healthy lifestyle choices in their diet to help prevent serious diseases that affect Blacks more commonly than Whites such as heart disease, diabetes and cancer.\(^{22}\)

• **Diabetes Self-Management Program** – The Diabetes Self-Management Program, developed by the Indiana Minority Health Coalition, is a health education program targeting racial/ethnic minority adults who have diabetes or are at risk of developing diabetes. The program increases knowledge, awareness and self-management of diabetes through education. The educational program meets weekly for six weeks for approximately 90 minutes. The sessions are culturally relevant and include lectures, group discussions, video and educational materials. Each session covers a different diabetes topic focusing on risk factors, signs and symptoms, associated health conditions, self-management and behavioral skills.\(^{23}\)

• **Diabetes Self-Management and Education Programs** – The Defeat Diabetes Foundation provides diabetes self-management and education classes in several locations throughout Central Indiana. The classes are offered by various hospitals and other healthcare organizations.\(^{24}\)

• **Diabetes Clinical Program** – The Diabetes Clinical Program is offered by Riley Hospital and targets children who have been newly diagnosed with diabetes. The program provides inpatient assessment of the child’s health along with ongoing education and support to the child and his or her family.\(^{25}\)

Both the CDC and the American Diabetes Association offer resources for people with diabetes and pre-diabetes, and health care practitioners, some of which include:

• Fact sheets and answers to frequently asked questions;

• Self-management education and materials;

• Clinical treatment guidelines;

• Opportunities for professional education and exchange;

• The latest news in diabetes research;

• Updates to diabetes related issues including screening, lifestyle interventions, medical interventions, diabetes testing and diagnosis, treatment of co-morbidities, and diabetes management in special settings; and

• Opportunities to connect with other people with diabetes.

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**Diabetes Self-Management Education (DSME)**

DSME is an essential element of diabetes care that helps people initiate self-care when they first diagnosed with diabetes and to maintain effective self-care as their health conditions, and as treatment options change. The American Diabetes Association has made the following recommendations regarding DSME:\(^{26}\)

• People with diabetes should receive DSME according to national standards when their diabetes is diagnosed and as needed thereafter.

• DSME should be provided by health care providers who are qualified to provide DSME based on their professional training and continuing education.

• DSME should address psychosocial issues, since emotional well-being is strongly associated with positive diabetes outcomes.

• DSME should be reimbursed by third-party payors.
In order to ensure the health of children with diabetes in schools, the 2007 Indiana General Assembly Public Law 166-2007 [IC 20-34-5], requiring the Department of Education to provide annual diabetes training and education program for school nurses and volunteer health aides. The Indiana Department of Education also operates the Coordinated School Health Program (CSHP). The CSHP is a school-based multi-component program designed to improve student health, wellness, and learning through providing health education, health care services, physical education, appropriate nutrition, mental health services, safe and healthy school environments, and parental involvement.

Factors Affecting Current Conditions

In order to live successfully with Type 1 or Type 2 diabetes, affected individuals must engage in a healthy lifestyle which involves among other things regular glucose monitoring, taking necessary medications, eating an appropriate diet, maintaining an appropriate weight, engaging in regularly physical exercise, visiting one’s physician regularly, and having periodic dental and vision exams.

Researchers have found a number of factors that affect how well people with diabetes adhere to their treatment regimens. One of the most significant disparities associated with treatment adherence is racial disparity. Blacks who have diabetes are less likely than Whites to have glycosylated hemoglobin or lipid levels monitored, less likely to receive ophthalmologic care or necessary vaccinations, and less likely to obtain follow-up appointments with a physician after having been hospitalized for care. When compared to Whites with diabetes, Blacks with diabetes had worse glycemic control due to poor medication management. It has been suggested that Blacks receive poorer care because they may prefer to avoid medical testing, may have difficulty gaining access to the healthcare system, and may experience difficulty finding transportation to locations where lower-cost health care services are provided.

While youth in general struggle to follow care recommendations for diabetes such as exercising, watching less television, and avoiding sugary snacks and beverages, Black youth report poorer adherence than White youth. Income level, lack of insurance coverage, and poor access to health care have also been linked to poorer compliance with treatment.

Because supplies related to diabetes treatment can be expensive, the law in Indiana (IC 27-8-14.5) requires that medically necessary treatment for diabetes, including medically necessary supplies and equipment, such as blood glucose monitors, blood glucose test strips, insulin, syringes, insulin pumps and accessories and oral diabetes medications be covered by insurance. Coverage for education on diabetes self-management is also required. Individuals who have health insurance including Medicaid or state-provided insurance are able to receive this level of coverage.

Likely Future Developments

While a review of how well Central Indiana compares to the goals set by Healthy People 2010 shows that some progress is being made, the prevalence rate of diabetes in the Central Indiana area is above the target level and is slowly, but steadily, rising. The impact of this increase in the prevalence of diabetes could likely lead to:

- Increasing health care costs related to diabetes;
- Increasing diabetes-related deaths, especially in Blacks;
- Increasing rates of diabetes in younger age groups; and
- Increasing rates of diabetes-related health complications.

Community’s Capacity to Address Current and Future Conditions/Recommendations

Although a number of community resources exist to help individuals with diabetes, the trends would indicate that more work is needed. Because excess weight is linked to the development of Type 2 diabetes, many of the recommendations made to address issues of overweight and obesity could be used to address diabetes. The following table includes additional recommendations.
### Promising Practices - The Diabetes Prevention Program (DPP)

The DPP is an evidence-based, lifestyle intervention designed to help individuals at risk of developing Type 2 diabetes from doing so. The key characteristics of the program are:

- Clearly defined weight loss goals,
- Clearly defined physical activity goals,
- Individualized case managers or lifestyle coaches,
- Intensive, ongoing intervention including supervised exercise, sessions, group classes, motivational campaigns, etc.,
- Individualized programming using a “toolbox” of adherence strategies,
- Materials and strategies that address the needs of an ethnically diverse population, and
- An extensive local and national network of training, feedback, and clinical support.

### Results of the DPP were:

- A 58% reduction in the development of new cases of diabetes.
- The DPP was more successful than medication in reducing the development of new cases of diabetes.\(^20\).

### Current Research

- The YMCA of Greater Indianapolis has partnered with the IU School of Medicine to adapt the DPP to community-based settings.
- The program has been simplified to make administration and monitoring easier for participants and community-based agencies.
- Trials are currently underway in Indianapolis to determine how well the modified program compares to the original version of DPP.
- The YMCA and the IU School of Medicine hope the adapted version will allow a successful program to be implemented more easily and more cost effectively throughout Indiana.\(^35\)

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</table>

Community organizations and agencies partner with public and private health care providers to offer diabetes education classes and adapted versions of the Diabetes Protection Program. There is a particular emphasis on the Black community.
Endnotes


7 Marion County Health Department. Marion County Needs Assessment. Indianapolis, IN: Marion County Health Department; 2008.


10 Marion County Health Department. Marion County Needs Assessment.


12 Marion County Health Department. Marion County Needs Assessment.

13 Marion County Health Department. Marion County Needs Assessment.


31 Mullins CD, Blatt L, Gbarayor CM, Yang H-WK, Baquet C.


Health — Immunizations

INTRODUCTION

Immunizations are an effective method of reducing the incidence and prevalence of many common and often serious, childhood diseases such as measles, mumps and polio. The current recommended immunization schedule for young children between the ages of 19 to 35 months of age includes:1

- 4 doses of the diphtheria-tetanus-acellular pertussis vaccine;
- 3 doses of the polio vaccine;
- 1 dose of the measles-mumps-rubella vaccine;
- 3 doses of the Haemophilus influenzae type b vaccine;
- 3 doses of the hepatitis B vaccine; and
- 1 dose of the varicella vaccine.

This vaccination schedule is referred to as the 4:3:1:3:3:1 vaccine series. Because of the importance associated with childhood vaccinations, the U.S. Department of Health and Human Services (DHHS) in its health prevention initiative, Healthy People 2010, has indicated that by the year 2010, at least 90% of all young children between the ages of 19 to 35 months should have completed the 4:3:1:3:3:1 vaccine series. Healthy People 2010 also calls for 95% of children in licensed day care facilities and in kindergarten through first grade to maintain their immunization coverage.2

Vaccines can also help prevent the spread of disease among certain at-risk populations, particularly the elderly. Two common infectious diseases, which can be particularly dangerous to the elderly, are influenza and pneumonia. In fact, influenza and pneumonia are the eighth leading cause of death in Indiana overall. The immunization goals outlined in Healthy People 2010 are to have at least 90% of adults 65 years or older receiving annual influenza vaccines and to have at least 90% of adults 65 years or older vaccinated at least once against pneumonia.3

CURRENT CONDITIONS

Children’s Vaccinations. At the national and state level, the percentage of young children receiving the 4:3:1:3:3:1 vaccine series has been steadily increasing. During 2003, approximately 70% of all 19-35 month old children in the United States were fully immunized. For the same year in Indiana, just under 57% had received the 4:3:1:3:3:1 vaccine series. By 2007, the percentage of 19-35-month-old children in Indiana having received the 4:3:1:3:3:1 vaccine series had climbed to 76.5%, nearly matching the national percentage of 77.5%.4

On average since the 1999-2000 school year, approximately 82% of children enrolled in child care facilities in Indiana have received their necessary vaccines. Over 90% of children enrolled in Indiana’s
Head Start programs have completed their required vaccine schedule. For Hoosier children attending school, administrators reported that 96% were fully immunized during the 2006-2007 school year. Following are school immunization rates for the six-county United Way of Central Indiana (UWCI) service area.

Note: The immunizations and doses required for a child to be considered “complete” in a given year can vary year-by-year. State law (IC 20-34-4-2) currently requires all students to be immunized against diphtheria, pertussis, tetanus, measles, rubella, poliovirus and mumps. Kindergarten and first-grade students are also required to be immunized against varicella and hepatitis B. The number of schools reporting immunization data varies each year. All public and private schools are required to report; however, the number of schools as well as the number of schools that choose not to report changes yearly.

Table 1: Boone County School Immunizations
School Immunization Reporting, Boone County, 2005-2006 Through 2007-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Enrolled</th>
<th>Total Complete</th>
<th>Percent Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>2,304</td>
<td>2,278</td>
<td>98.9%</td>
</tr>
<tr>
<td>2006-2007</td>
<td>2,313</td>
<td>2,289</td>
<td>98.9%</td>
</tr>
<tr>
<td>2007-2008</td>
<td>2,499</td>
<td>2,395</td>
<td>95.8%</td>
</tr>
</tbody>
</table>

Table 2: Hamilton County School Immunizations
School Immunization Reporting, Hamilton County, 2005-2006 Through 2007-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Enrolled</th>
<th>Total Complete</th>
<th>Percent Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>9,422</td>
<td>9,295</td>
<td>98.7%</td>
</tr>
<tr>
<td>2006-2007</td>
<td>12,115</td>
<td>11,633</td>
<td>96.0%</td>
</tr>
<tr>
<td>2007-2008</td>
<td>11,784</td>
<td>11,598</td>
<td>98.4%</td>
</tr>
</tbody>
</table>

Table 3: Hancock County School Immunizations
School Immunization Reporting, Hancock County, 2005-2006 Through 2007-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Enrolled</th>
<th>Total Complete</th>
<th>Percent Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>2,878</td>
<td>2,820</td>
<td>98.0%</td>
</tr>
<tr>
<td>2006-2007</td>
<td>2,835</td>
<td>2,787</td>
<td>98.3%</td>
</tr>
<tr>
<td>2007-2008</td>
<td>3,053</td>
<td>2,970</td>
<td>97.3%</td>
</tr>
</tbody>
</table>

Table 4: Hendricks County School Immunizations
School Immunization Reporting, Hendricks County, 2005-2006 Through 2007-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Enrolled</th>
<th>Total Complete</th>
<th>Percent Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>5,790</td>
<td>5,315</td>
<td>91.8%</td>
</tr>
<tr>
<td>2006-2007</td>
<td>5,759</td>
<td>5,613</td>
<td>97.5%</td>
</tr>
<tr>
<td>2007-2008</td>
<td>6,306</td>
<td>6,198</td>
<td>98.3%</td>
</tr>
</tbody>
</table>

Table 5: Marion County School Immunizations
School Immunization Reporting, Marion County, 2005-2006 Through 2007-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Enrolled</th>
<th>Total Complete</th>
<th>Percent Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>39,517</td>
<td>31,852</td>
<td>80.6%</td>
</tr>
<tr>
<td>2006-2007</td>
<td>48,367</td>
<td>36,781</td>
<td>76.0%</td>
</tr>
<tr>
<td>2007-2008</td>
<td>38,382</td>
<td>33,977</td>
<td>88.5%</td>
</tr>
</tbody>
</table>

Table 6: Morgan County School Immunizations
School Immunization Reporting, Morgan County, 2005-2006 Through 2007-2008

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Enrolled</th>
<th>Total Complete</th>
<th>Percent Complete</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-2006</td>
<td>2,958</td>
<td>2,908</td>
<td>98.3%</td>
</tr>
<tr>
<td>2006-2007</td>
<td>2,919</td>
<td>2,886</td>
<td>98.9%</td>
</tr>
<tr>
<td>2007-2008</td>
<td>2,982</td>
<td>2,904</td>
<td>97.4%</td>
</tr>
</tbody>
</table>
Nationally, children living below the poverty level and children from ethnic minorities, particularly Blacks and Hispanics, have poor immunization coverage rates. However, whether racial disparities exist in immunization coverage rates for children in the UWCI service area cannot currently be determined.7

Adolescent Vaccinations

In addition to the full complement of childhood vaccinations, adolescents and teens must also consider recommended vaccinations and boosting schedules. Since 2005, three new vaccines specifically for adolescents have been licensed and recommended in the United States: meningococcal conjugate vaccine at age 11 to 12 years and age 15 years; Tetanus-diphtheria-acellular pertussis vaccine at age 11 to 12 years (or at age 13 or 18 years if not given previously); and human papillomavirus (HPV) vaccine for girls ages 11 to 12 years (or ages 13 to 18 years if not given previously).8

According to the CDC’s annual National Immunization Survey, in 2006 the percentage of adolescents who had received recommended vaccines fell below Healthy People 2010 goals for 90 percent coverage for adolescents 13 to 15 years of age. The lowest estimates were associated with the most recently recommended vaccines. About 60% of 13 to 17-year-olds received a tetanus-diphtheria or tetanus, reduced diphtheria and acellular pertussis vaccination since age 10, but only 10.8 percent for tetanus, reduced diphtheria and acellular pertussis alone, and 11.7 percent had received a meningococcal conjugate vaccine vaccination.9

Human Papillomavirus (HPV) Vaccine

HPV is the most common sexually transmitted disease. Several different forms of HPV exist. Some forms of HPV are responsible for causing genital warts. Other, more serious forms are responsible for causing cervical cancer. In June of 2006, the FDA approved Gardasil, a vaccine to prevent the types of HPV most commonly associated with causing cervical cancer. Gardasil is given in a three-injection series and ideally should be administered to females before they become sexually active. However, the FDA recommends that all women 26 years of age or younger, regardless of their sexual history, be immunized against HPV.10

Adult Vaccinations

The percentage of adults, 65 years of age or older receiving annual flu shots has changed little across the nation, the state of Indiana, or the Central Indiana area since 2002. In 2006, approximately 70% of people in the U.S., 65% of people in Indiana, and 70% of people in Central Indiana age 65 or older received a flu shot during the past 12 months.11,12 During the period from 2002 through 2006, in the U.S., Indiana, and the Central Indiana area, the percentage of adults 65 years of age or older who reported ever receiving a pneumonia vaccine changed very little. In 2006, approximately 67%, 64%, and 68% of adults 65 years of age or older in the U.S., Indiana, and Central Indiana respectively had ever had a pneumonia vaccine.13,14 Differences did exist in the percentage of Whites and Blacks who received flu vaccines and pneumonia vaccines in the Central Indiana area. In 2006, more White residents (69.0%) than Black residents (48.3%) said they had received a flu vaccine in the past 12 months. Similarly, more white adults in 2006 (69.0%) reported having ever had a pneumonia vaccine than did black adults (48.0%). The racial disparity in immunization rates for adults in Central Indiana is similar to that found in the rest of the nation.15,16

Figure 1: Percent of Adult Populations Over Age 65 Who Had a Flu Shot in the Past 12 Months
Adult Immunization Recommendations

Many adults wrongly believe that the vaccines they received as children provide them with a lifetime of immunity. Many vaccines gradually lose their effectiveness over time, and there are vaccines available today that were not available when many older adults were children. All adults are encouraged to keep their immunizations current. The CDC recommends that adults consider receiving the following immunizations:

- **Diphtheria** – All adults should receive a diphtheria vaccine if they have not had one in the past 10 years or more or never had the initial 3-shot series.
- **Herpes Zoster (shingles)** – All adults 60 years of age or older should have a single dose of the Herpes Zoster vaccines.
- **Influenza (flu)** – All adults 50 years of age or older should get a flu vaccine annually.
- **Measles/Mumps/Rubella (MMR)** – Adults who are students in college, trade schools, or other educational settings, adults who work in hospital or medical facilities, adults who travel internationally or on cruise ships, and women of childbearing age should have an MMR vaccine.
- **Meningococcal** – A meningococcal vaccine is recommended for first-year college students who live in dormitories and military recruits.
- **Pertussis (whooping cough)** – Adults under 65 years of age who have never had a dose of the tetanus/diphtheria/acellular pertussis vaccine or adults whose last tetanus vaccine was more than 10 years ago should be immunized.
- **Pneumococcus** – Adults 65 years of age or older should receive this vaccination.
- **Tetanus** – Every adult needs protection from tetanus. Adults should receive a tetanus shot once every 10 years. Adults who never received a tetanus shot during childhood should have a series of three tetanus shots.

Response Systems

Many low cost or free services are available to children and adults with little or no health insurance in order for them to receive required or medically necessary vaccinations. For example:

- Free and low-cost immunizations are available through all County Health Departments to both children and adults.18
- Indianapolis Public Schools offers immunizations at reduced rates during their annual back to school fair.
- Wishard Hospital offers low-cost immunizations through its community health centers in Marion County.19
- Other local community health centers and hospitals also offer low-cost immunizations.20
- Visiting Nurses Service (VNS) annually runs the Bugbuster Flu and Pneumonia Shot Campaign throughout Central Indiana. The Bugbuster Campaign provides flu and pneumonia shots to children and adults. VNS does not accept insurance, and the price of shots is not flexible.21
Factors Affecting Current Conditions

- Because of the efficacy with which vaccines can prevent the spread of disease, the 2004 Indiana General Assembly passed legislation requiring that all children living in the state of Indiana be immunized against diphtheria, pertussis, tetanus, measles, rubella, polio and mumps. Additionally, every child who enters kindergarten is legally required to be immunized against Hepatitis B and mumps.22
- Day care providers are also legally required to maintain up-to-date documentation provided by a physician on all children in their care. Children in child care facilities are required to have received all vaccinations deemed necessary for their age by the Indiana State Department of Health.23
- ISDH also has immunization requirements children must meet before enrolling in the school system.24

Figure 3: Indiana State Department of Health 2008-2009 School Immunization Requirements

Likely Future Developments

The over-time trend in vaccination has gradually increased. Because of the legal requirement that children in the state of Indiana be vaccinated and because vaccines are required for child care and school admission, the likelihood is that Indiana’s overall vaccination rate will continue to improve. Indiana is approaching the immunization goals for children who receive child care services through Head Start and public child care facilities. Currently, Indiana is meeting the Healthy People 2010 goal for children enrolled in a school setting. The percentage of adults who receive annual flu shots and pneumonia vaccines has been stable in Central Indiana and is currently below what Healthy People 2010 proposes. Without additional outreach and community effort, 30% or more of adults 65 years of age and older may continue to go without this type of care.

Recommendations

Although immunizations and vaccinations are available through a number of low or no cost sources, individuals who need them may still not get them. Further, the importance of immunizations and boosting for adolescents and teens is not widely understood as demonstrated by the low prevalence of some recommended vaccines among this population. Following are recommendations to ensure that at-risk populations have the required vaccinations for maintaining good health.
<table>
<thead>
<tr>
<th>Where We Should Be</th>
<th>Priority</th>
<th>How to Get There</th>
<th>Financial Resources Requirements / Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public Policy Advocacy</td>
<td>Community Education</td>
</tr>
<tr>
<td>All adults, particularly Blacks and other minorities, are aware of the Centers for Disease Control’s recommendations for adult vaccinations and booster shots.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adolescent and teen youth have all recommended immunizations and booster shots.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Endnotes


3 Ibid.


7 Centers for Disease Control and Prevention. Vaccines and Immunizations Statistics and Surveillance.


19 Ibid.

20 Ibid.


22 Indiana State Department of Health. Immunization Reports.

23 Ibid.

24 Ibid.

United Way of Central Indiana publishes the 2008 Community Assessment and provides it to the community as a credible source of information and insight for the greater Central Indiana region.
The Health chapter is generously sponsored by Kroger Pharmacy.
**INTRODUCTION**

Infant health indicators, including rates of low birth-weight and infant mortality, are frequently used indicators of the health status of a community because they reflect the overall state of maternal health as well as the quality and accessibility of primary health care available to pregnant women and infants. Despite steady declines nationally in infant mortality during the 1980s and 1990s, the United States continues to have one of the highest infant mortality rates in the industrialized world. Nationally, Blacks have an infant mortality rate nearly two times that of Whites. The goal set in the U.S. Department of Health and Human Services’ (DHHS) Healthy People 2010 prevention initiative is to reduce infant mortality to a rate of 4.5 infant deaths per 1,000 live births regardless of a child’s ethnicity or racial background.¹

**Current Conditions**

The most recent data on infant mortality show that the average U.S. rate of infant mortality is 6.9 deaths per 1,000 live births. The national rate is below that reported for Indiana (8 deaths per 1,000 live births); and UWCI service area (8.1 deaths per 1,000 live births).² Within the UWCI service area, Marion County had the highest infant mortality rate (IMR) in 2005 with 9.9 deaths per 1,000 live births.³

As the above mortality rates indicate, the IMR in the UWCI service area for 2005 was almost double the goal set by the DHHS for the year 2010. When infant mortality within the UWCI service area is broken down by race, clear disparities become evident. From 1999 through 2005, the IMR for Blacks was at least double the IMR for Whites. The IMR for Blacks has dropped somewhat over time from a high of nearly 18 in 1,000 in 1999 to a rate of 14.9 in 2005. The IMR for Whites has changed little over the period from 1999 through 2005. The rate of infant mortality in 2005 for Whites living in the UWCI service area was 6.4. The IMR for Hispanics living in the UWCI service area has been somewhat variable with rates typically trending below those of Whites. However, IMR for Hispanics appear...
to be on the rise. The IMR for Hispanics in 2005 was 10 deaths per 1,000 live births. This rate places the Hispanic IMR above that of Whites.4

Figure 2: Central Indiana Infant Mortality Rate by Race

Response Systems

A number of programs and services in the UWCI service area are available to women who are pregnant or have recently given birth.

- **Women Infants and Children (WIC)** – WIC is a program operated by the U.S. Department of Agriculture's Food and Nutrition Service. WIC provides federal grants to states to improve the health of nutritionally at-risk women, infants and children. WIC services are available through 21 locations in Central Indiana.

- **Prenatal Substance Use Prevention Program (PSUPP)** - PSUPP is a three-tier prevention program administered by the Indiana State Department of Health with federal funds granted by the Indiana Division of Mental Health and Addiction/Family and Social Services Administration. The program focuses attention on the general public, health care providers, and pregnant substance users. The goal of Indiana PSUPP is to prevent birth defects, low birth weight, premature births, and other problems associated with prenatal substance use. PSUPP is exploring collaboration with Indiana’s Office of Medicaid Policy and Planning and contracted managed care organizations to decrease prenatal smoking among pregnant Medicaid clients.

- **Healthy Indiana Plan (improving interconception health)** – ISDH’s Maternal and Child Special Health Services has worked with OMPP to facilitate the implementation and dissemination of information regarding the Healthy Indiana Plan (HIP) that became effective January 1, 2008. HIP has the potential to impact interconception health by allowing women to access health insurance during the interconception period to obtain preventative care and wellness, such as early detection and management of chronic illnesses and obesity, access to family planning methods (prescription birth control and other options), access to mental health care and dental care, and access to PAP smears and annual physicals. However, the federal Centers for Medicare and Medicaid Services approve only one waiver annually, and because HIP obtained priority for approval, Indiana's Medicaid Family Planning waiver is still pending.

- **Indiana Perinatal Network (IPN)** – The IPN was established as an alliance between individuals, organizations and providers across the state that works to ensure that all mothers have a healthy pregnancy and that all infants are born healthy. IPN coordinates several programs including Indiana Access and Baby First...Right from the Start.

- **Healthy Families** – The Healthy Families program is a voluntary home visitation program that promotes healthy families and healthy children through a variety of services including child development, access to health care and parent education. The program serves at-risk families with children 0-5 years. Program goals include prevention of negative birth outcomes such as low birth weight, substance abuse, criminal activity and child abuse and neglect; increased parenting skills; healthy pregnancy practices; and the use of social systems.

- **Healthy Babies** – The Healthy Babies program is a program of the Marion County Health Department that works to improve the health of babies and their families. The program improves the identification and treatment of substance abuse problems in pregnant women, provides prenatal and postnatal education with a focus on assuring that high-risk pregnant women are aware of the resources available to them, and offers outreach to communities and providers.
• **Indianapolis Healthy Start** - Indianapolis Healthy Start (IHS) is a community-based program that provides health care services for pregnant women who are at risk for poor birth outcomes. It promotes positive prenatal health behaviors, ensures access to adequate prenatal care and empower clients to meet the health care needs of their families. Core services include case management and referral, interconception care, depression screening and referral, health education and community outreach.

**Factors Affecting Current Conditions**

According to ISDH, there are several risk factors related with infant mortality and other negative birth outcomes. These include:

- Being a single parent;
- Having a low birth weight infant;
- Lacking prenatal care or starting prenatal care after the first trimester;
- Being a teenager;
- Having a low level of education; and
- Smoking during pregnancy.

**Single Parents**

Marital status is thought to be an indicator of other risk factors that may affect birth outcome, including health status and behaviors during pregnancy, as well as social, emotional and financial resources. Nationally, in 2002, unmarried women were 80% more likely to experience an infant loss than were married women. During the period from 1999 to 2004, Indiana has experienced a slow increase in the percentage of infants born to unmarried women. Births to unmarried women have increased from 33.6% of all births in 1999 to 37.5% of all births in 2004. The UWCI service area has also seen an increase in births to unmarried women from 22.5% of all live births in 1999 to 26.1% of all live births in 2004. The rising trend in births to unmarried women is present across all six counties served by UWCI. Hamilton County reported the lowest percentage of births to unmarried women across all years for which data was available (range = 10.1% to 11.4%). Marion County reported the highest percentage of births to unmarried women among black mothers in Marion County ranged from 74.7% to 75.7%, for Hispanic mother the range was 54.2% to 60.1% while the same percentage for white mothers in Marion County ranged from 33.2% to 36.1%.

**Low Birth Weight**

A low birth weight infant is one born weighing less than 2,500 grams, or less than 88 ounces (5.5 pounds). Low birth weight is a strong predictor of adverse birth outcomes, health problems and disabilities later in life, and is strongly associated with infant mortality. From 1999 through 2004, the percentage of low birth weight Hoosier infants has been stable at approximately 7.5% compared to 7.0% in the UWCI service area. The percentage of low birth weight babies for black mothers in the UWCI areas is higher, at approximately 13% of all births. Hendricks County reported the smallest average percentage of low birth weight infants over the time period reviewed (5.8%), while Marion and Morgan Counties had the highest average percentages (approximately 9% and 8.5% respectively).
Inadequate Prenatal Care

Women who do not receive prenatal care or receive inadequate care are nearly two times as likely to experience adverse birth outcomes. For the period from 1999 through 2004, the percentage of Indiana mothers receiving less than adequate prenatal care has been stable at just over 25%. In the UWCI service area, the percentage of births to mothers who received inadequate prenatal care decreased between the period from 1999 (18.8%) to 2004 (17.4%). These percentages are below those reported for Indiana as a whole during the same period. Within the counties served by the UWCI, Marion County had the highest percentage of infants born to women who had not received adequate prenatal care across all years reviewed. Marion County has experienced an increase over time in the number of women not receiving sufficient prenatal care from 25.7% in 1999 to 28.9% in 2004. Data on prenatal care by race was not available for the entire UWCI service area, but such data was available for Marion County. Nearly 85% of white mothers received prenatal care while only approximately 70% of black mothers and 58% of Hispanic mothers received prenatal care from 1999 through 2004.\(^8\)

Maternal Education

Maternal education has long been considered an important factor in fertility and maternal and infant health, and has been shown to have a profound effect on the number of births and the risk of adverse birth outcome. Women with higher educational attainment are more likely to desire and give birth to fewer children, and are less likely to engage in behaviors detrimental to health and pregnancy (http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_06.pdf). The percentage of infants in Indiana born to mothers with low educational attainment has increased slightly from 15.9% in 1999 to 17.9% in 2004. In the UWCI service area the percentage of births to women with limited educational attainments has remained stable at between 9% - 10% of all births. Within the counties served by UWCI, Hamilton County had the lowest percentage of births to women with lower educational attainment while Marion County experienced the highest percentage. The percentage of births to women with lower educational attainment has been increasing steadily in Marion County since 1999 (1999 = 17.7%, 2004 = 23.1%).\(^9\)
Births to Teenage Parents

Births to teenagers have been associated with late entry into prenatal care, inadequate prenatal care, reduced educational attainment, fewer employment opportunities, increased likelihood of poverty, and poorer infant health and development outcomes. Indiana has experienced a slow but steady decline in the percentage of infants born to teenage parents during the period from 1999-2004, declining from a high of 14.5% in 1999 to 11% in 2004. The UWCI service area has experienced a similar decline from 9.3% in 1997 to 7.9% in 2004. The six counties served by the UWCI also show signs of steady declines in teenage births. During the time period studied, Hamilton County had the lowest number of infants born to teenagers (3.3% on average), while Marion County had the highest (13.9% on average).10

Smoking During Pregnancy

Smoking has been associated with many adverse birth outcomes, especially low birth weight. Smoking by pregnant women within the state of Indiana has decreased slowly but steadily over time. In 1999, 21.2% of pregnant Indiana women reported smoking. By 2005, the percentage of Indiana women who smoked during pregnancy was 17.9%. Only 14.0% of black mothers smoked, while 18.7% of white mothers smoked during pregnancy. Smoking during pregnancy is most prevalent among white women of ages 18-19 (30.7%) and 20-24 (27.7%). The UWCI service area has consistently reported a lower percentage of women smoking during pregnancy. During 1999, 16.8% of pregnant women in the UWCI service area reported smoking. This number had dropped to 14.7% in 2004. Of the counties served by the UWCI, Hamilton County had the lowest percentage of mothers who smoked during pregnancy across all years studied (6.9% on average) while Morgan County had the highest (25%) on average. The percentage of women smoking during pregnancy in Morgan County was higher than both the state and UWCI service area across all years studied.11

Other Factors

Some health officials suggest that obesity and unmanaged chronic health conditions such as diabetes and hypertension are also important risk factors related to infant health and negative birth outcomes. As a result, public health officials and health care providers are beginning to recognize the importance of a woman’s preconception health in relation to infant health. Since upwards of 50% of all pregnancies are unintended according to the CDC,12 promoting healthy lifestyles for and ensuring access to affordable health care by all women of childbearing age are important strategies likely to positively impact birth outcomes.

Likely Future Developments

A review of infant mortality trends indicates that the IMR in the UWCI service area is higher than in the rest of the nation. Though IMRs dropped somewhat from 1999 through 2001, rates are increasing again. One of the most significant changes is the rise in the IMR for Hispanics living in the UWCI service area. If trends remain consistent, then Central Indiana could expect to see even higher IMRs over the next several years.
Community’s Capacity to Address Current and Future Conditions/Recommendations

The information available on infant mortality would indicate that the area served by UWCI still has work to do in order to reach the goal set in Healthy People 2010 of reducing infant mortality to 4.5 deaths per 1,000 live births. Marion County has the most challenges of the six counties within the UWCI service area. While many services and programs exist, data show that they may not be reaching all women who need assistance. Some suggestions to help improve the current conditions would include:

<table>
<thead>
<tr>
<th>Where We Should Be</th>
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<th>How to Get There</th>
<th>Financial Resources Requirements / Implications</th>
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</thead>
<tbody>
<tr>
<td>Community Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaboration</td>
<td></td>
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<td></td>
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<tr>
<td>Expanded Programming</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fed.** Federal **State** State **Local** Local **Pub. Schools** Public Schools **government** Government **Community** Community

**Prenatal programs help women, in particular black and Hispanic women, modify behaviors, lifestyles, and conditions that affect birth outcomes such as smoking, alcohol use, caffeine intake, substance abuse, poor nutrition, lack of prenatal care, medical problems and chronic illness.**

**Critical**

**Community agencies and health providers effectively encourage women to seek prenatal care in the first trimester.**

**Critical**

**All women of child bearing age are aware of health issues that can affect infant health such as pre-pregnancy weight, smoking and chronic disease.**

**Desirable**
Policy Recommendations for Improving Birth Outcomes and Reducing Infant Mortality

To improve birth outcomes and reduce infant mortality, policy changes in three areas are recommended.13

Improving Access to Medical Care by:
- Increasing Medicaid eligibility to women at or below 300% of the federal poverty level (and including coverage for prenatal, labor and delivery, and post partum care);
- Providing presumptive eligibility for Medicaid benefits;
- Providing continuous Medicaid eligibility regardless of small changes in income;
- Using state Children’s Health Insurance Program to cover pregnant women; and
- Applying for a Family Planning Waiver to extend family planning services to women and men who are ineligible for Medicaid.

Encouraging Good Nutrition and Healthy Lifestyles by:
- Publicizing Women, Infants, and Children programs effectively so all eligible individuals can participate;
- Preventing birth defects through folic acid consumption campaigns;
- Preventing perinatal HIV/AIDS transmission by encouraging testing and providing appropriate antiretroviral therapy; and
- Preventing domestic violence.

Reducing the Use of Harmful Substances such as Cigarettes and Alcohol During Pregnancy by:
- Improving access to smoking cessation programs;
- Providing Medicaid reimbursement for smoking cessation;
- Encouraging abstinence from smoking, drinking and drug use through education, outreach, and training to mothers and healthcare providers; and
- Increasing access to substance abuse treatment.

Endnotes
4 Ibid.
6 Ibid.
7 Ibid.
8 Ibid.
9 Ibid.
10 Ibid.
11 Ibid.

United Way of Central Indiana publishes the 2008 Community Assessment and provides it to the community as a credible source of information and insight for the greater Central Indiana region.
Health — Injury and Violence Prevention

The Health chapter is generously sponsored by Kroger Pharmacy.
INTRODUCTION

One of the primary goals of the U.S. Department of Health and Human Services' (DHHS) Healthy People 2010 prevention initiative is the reduction of injuries, disabilities and deaths due to unintentional injuries and violence. Most people will sustain a significant injury at some point in their lives, but many injuries are predictable and preventable. Despite this fact, many people fail to take the necessary precautions to reduce the chance of unintentional injury. The indirect costs of injuries are human suffering and even loss of life. Injuries also have a financial cost including medical care, rehabilitation, and lost income and opportunities. Given that the cost of preventing unintentional injuries is typically lower than the cost of treating them, it makes sense that focus should be placed on injury prevention.¹

Violence is also a common feature of life in the United States, drastically reducing the quality of life for those involved. Violence includes not only acts of violence toward others such as homicide, but also acts towards one's self, with the most extreme being suicide. Finding ways to reduce violence is an important public health issue.

The DHHS's Healthy People 2010 initiative outlines an extensive list of goals for injury prevention. Those most relevant to Central Indiana are:²

- reducing firearm-related deaths to 4.1 deaths per 100,000 individuals and reduce firearm related injuries to 8.6 per 100,000 individuals;
- reducing the proportion of persons living in homes with firearms that are loaded and unlocked;
- reducing nonfatal poisonings to 292 per 100,000 individuals and fatal poisoning to 1.5 deaths per 100,000 individuals;
- reducing deaths and injuries caused by motor vehicle crashes;
- reducing pedestrian deaths and injuries on public roads;
- increasing the use of safety belts and child restraints;
- increasing helmet use by motorcyclists and bicyclists;
- reducing homicides to 3 per 100,000 individuals;
- reducing physical assaults; and
- reducing fighting and weapon carrying by adolescents.

CURRENT CONDITIONS

To gain a better understanding of the prevalence and patterns of unintentional injuries and violence in the United Way of Central Indiana service area, this section will investigate the most current data available for an area including Boone, Hamilton, Hancock, Hendricks,
Marion, Morgan and Shelby counties. The investigation will consider prevalence rates as well as how these rates vary based on age, race and sex. This section will describe fatalities due to some of the leading causes of accidental death in Indiana including motor vehicle accidents, falling, accidental poisoning and overdose, drowning, fire injury and burns. There will also be discussions of fatalities due to homicides and suicides, again comparing Central Indiana’s rates to the national rates and investigating differences by age, sex and race.

Unintentional Injury Deaths

In 2005, accidents claimed the lives of 435 Central Indiana residents, a rate of 27.79 deaths per 100,000 people. This is an increase from the 391 accidental deaths in Central Indiana in 2001, a rate of 26.42 deaths per 100,000. The national rate of fatalities due to accidents is higher than that in Central Indiana, starting at 34.79 in 2000 and increasing to a rate of 39.73 in 2005. The sections below will discuss the fatality rates of various accidents for both the nation and Central Indiana. Where the data allow, the discussion will also include differences due to age, sex and race.

Death by Motor Vehicle Accidents

Motor vehicle and traffic accidents are the most common type of accident in Central Indiana, accounting for 208 deaths in 2005. The age groups 15-19, 20-24 and 75-84 experienced the highest rates of fatal motor vehicle crashes in Central Indiana during 2005. Nationally, both younger and older adult drivers have the highest accident rates. There are significant gender differences in fatal motor vehicle accident rates, with males having higher rates than females. Motor vehicle accident fatality rates are similar by race.

Death by Falling

The overall death rate from falls in Central Indiana is only 3.71 fatalities for every 100,000 persons during 2005. The national death rate by falls is 6.63 fatalities per 100,000 people. Fatalities from falling are most prominent among older adults, especially among those aged 65 and older. Even within this group, death by falls are more than 10 times more common among those of age 85 and up (114.21 fatalities per 100,000) than among those of age 75 to 84 (19.19 fatalities per 100,000).
Death by Accidental Poisoning and Overdose

Accidental poisoning and overdoses accounted for 26 fatalities in Central Indiana in 2005. This is a rate of 1.66 fatalities for every 100,000 Central Indiana residents. This rate is exceptionally low in comparison to the national rate of 7.97 fatalities per 100,000. The rate was highest for those aged 25-34. No one in Central Indiana aged 19 or under died from accidental poisoning or an overdose in 2005.7

Death by Drowning

Accidental drowning accounted for 14 deaths in Central Indiana in 2005, resulting in a rate of .89 fatalities per 100,000 Central Indiana residents. This rate is slightly lower than the national rate of 1.21 fatalities per 100,000 residents. In Central Indiana, the highest drowning fatality rates are for adults 35-44 (1.59 per 100,000 individuals) and children aged 0-15 (1.14). Nationally, drowning rates are highest for young children (0-4) and older adults (85+).8

Death by Fire Injury and Burns

In Central Indiana in 2005, 10 people died from accidental exposure to smoke, fire and/or flames. This is a rate of 0.64 fatalities per 100,000 residents. Nationally, the fatality rate in 2005 was 1.08 per 100,000 persons. The highest fatality rates in Indiana were for children aged zero through 15 (1.14 fatalities per 100,000), those aged 55 through 64 (1.41 fatalities per 100,000) and those aged 65 through 74 (2.35 fatalities per 100,000). The patterns with respect to age are similar to both national and Indiana rates, with fatality rates highest for young children and for older adults.9

Suicide

Suicide in Central Indiana resulted in 164 fatalities during 2005. This is a rate of 10.32 suicides per 100,000 Central Indiana residents, which is lower than the national rate of 11.01. From 2000 to 2004, the suicide fatality rate was higher in Central Indiana than in the U.S.; however, the rate in the U.S. has been growing slowly, and the rate in Central Indiana decreased markedly in the past year.10

Suicide fatality rates are highest in Central Indiana among those aged 20-24 (27.96 per 100,000) and those aged 45-54 (16.55 per 100,000). In 2005, suicides in the state of Indiana resulted in 16,214 years of potential life lost (YPLL) before age 65. Suicide fatalities are the third leading cause of death for Indiana residents of ages 10-24 and are the second leading cause of death for Indiana residents between 25-34 years of age. Males (17.86 fatalities per 100,000) are more likely to die from suicide than females (3.09 fatalities per 100,000). Blacks in Central Indiana have a lower rate of suicide fatalities (7.13 per 100,000) than Whites (11.16 per 100,000), but Blacks in Central Indiana have a higher rate than Blacks do nationally (5.10 per 100,000).11,12
Homicides

There were a total of 127 homicides in Central Indiana during 2005, a rate of 8.11 fatalities per 100,000 residents. Of the 127 homicides committed in Central Indiana, 99 (a rate of 6.32) were committed by the discharge of a fire arm, while the remaining 28 (a rate of 1.79) were committed by some other means. Nationally the homicide rate of 6.11 fatalities per 100,000 is lower than Central Indiana’s rate. The national fatality rate for homicides committed with a firearm was 4.17 and is also lower than the rate for Central Indiana. During 2005, homicides in the state of Indiana were responsible for 12,799 YPLL before age 65.13,14

Homicide rates are highest for those aged 20-24 both in Central Indiana (29.96 fatalities per 100,000) and nationally (16.10 per 100,000). Homicide rates are also higher for males (13.23 for Central Indiana and 9.85 nationally) than for females (2.96 for Central Indiana and 2.49 nationally). The highest homicide fatality rate is for Black males, with a fatality rate of 62.13 per 100,000 individuals during 2005 in Central Indiana and a rate of 39.77 nationally. In fact, homicide is the leading cause of death for Black males in Indiana from age 15 to 34 and is one of the three leading causes of death for Black males aged 1-14. A total of 5,582 YPLL before age 65 were lost in Indiana due to homicides of Black males alone. This is 44% of all of the YPLL before age 65 due to homicide although Blacks account for just nine percent of Indiana’s total population.15,16

Response Systems

Preventive measures can be broadly categorized into two groups: universal preventive measures and selective prevention measures. Universal prevention measures are blanket measures that target everyone in a population. Examples of universal prevention strategies include speed limits, seatbelt and helmet laws. Selective prevention measures are focused on particular groups, usually those with higher risks. Examples of selective prevention measures include restrictions on teenage drivers (who have higher traffic fatality rates) and installing railings in the homes of older adults, (who have the highest rates of fatalities from falls).17

Central Indiana Homicide Fatality Rates per 100,000 Population, by Race and Gender, 2000-2005

Source: CDC WONDER. Condensed Mortality File.
Alcohol and drug use play a significant role in accidents, suicides and homicides. According to the Center for Urban Policy and the Environment, alcohol is a factor in approximately 30% of all crashes and 39% of fatal crashes in Indiana. Another study finds that nationally, 32% of falls, 42% of fatal fires and burns, 34% of fatal drownings, and 29% of fatal overdoses and poisoning involved alcohol consumption. Clearly, reducing alcohol consumption and reducing unsafe behaviors by those who are consuming alcohol, could play a large role in reducing the number of accident fatalities.

Universal strategies to reduce motor vehicle accidents include strategies that address the safety of cars such as the use of air bags, electronic stability control systems, antilock brakes and other vehicle safety systems. Universal strategies can also target the safety of the driver, including tougher laws on driving under the influence, blood alcohol content tolerance for drivers and cellular phone usage while driving. Selective measures include limitations on young and learning drivers as well as limitations on the number of hours which commercial drivers can drive.

Older adults are the most common victims of fatal falls. The installation of stair railings and banisters as well as handrails and better lighting throughout the households of older adults may help to prevent some accidental falls. In extreme cases, older adults may require supervised living.

Alcohol is a factor in at least 23% of suicides. As such, reducing alcohol and substance abuse can be expected to reduce suicide fatalities. This is especially true for those already at higher risk for suicide, including adolescents, older adults and the severely depressed. Another measure which can help reduce suicide fatalities is better primary care screening for depression. Connect2Help™, Inc., Central Indiana’s 2-1-1 human service information and referral service, is accredited by the American Association of Suicidology and provide crisis and suicide prevention hotline services. Mental Health America (MHA) of Greater Indianapolis also provides prevention, intervention, and referral service for crisis and suicide situations. Other local MHA affiliates and community mental health centers also offer crisis and suicide related services.

Homicide fatality rates are higher in Indiana than they are nationally. Several studies find a correlation between alcohol use by the victim and/or the offender and homicides. Reducing alcohol consumption thus is likely to result in lower homicide rates. Other strategies need to be developed and applied based on the type of homicides being committed. Finally, with the homicide rate among Blacks much higher than the overall homicide rate in Central Indiana, it is important to tailor homicide prevention strategies to fit the needs and cultural norms of the Black community.

Youth organizations, including Big Brothers Big Sisters, Boys and Girls Clubs, and Boy and Girl Scouts, can help steer children away from violence, alcohol and substance abuse. The Aftercare for Indiana through Mentoring Program, a juvenile reentry program, also helps steer youth away from violence and substance abuse. The Weed and Seed program, sponsored by the U.S. Department of Justice, is a program that seeks to weed out criminal activity and seed development toward community revitalization. These programs can also be useful in reducing violence and the homicide fatalities associated with violence. Connect2Help, Central Indiana’s 2-1-1 call center, provides resources for those considering suicide as well as for those suffering from domestic violence.

The Safe Kids Coalition has both an Indiana state affiliate and a local affiliate for Indianapolis. The Safe Kids Coalition is a nonprofit organization dedicated to the prevention of unintentional childhood injury. The Safe Kids Coalition works nationally and locally to change attitudes, behaviors and laws in order to reduce accidental injury in children.

Factors Affecting Current Conditions

A variety of factors affect Central Indiana’s accident and violence fatality rates, including cultural, behavioral and demographic factors. Behavioral factors include the use of seatbelts, helmets and the preponderance of drunk driving. Cultural factors include attitudes toward driving safety, social norms relating to violence and social norms relating to firearm ownership. Demographic factors include age, race and sex.

The Youth Risk Behavioral Surveillance System (YRBS) monitors priority health risk behaviors among children in grades 9 through 12. The Indiana State Department of Health conducts the survey every two years for Indiana, usually in the spring semester. Several risky behaviors are prominent among Indiana youth. Those relating to traffic fatalities include:

- 11% of children report driving while drinking;
- 27% report riding in a car driven by someone who is drinking;
- 13% report rarely or never wearing a seatbelt; and
- 93% never or rarely wear a bicycle helmet.
Male students report all of these behaviors at a higher rate than female students. The YRBS also reports the frequency of violence related behaviors. These behaviors include:

- 14% involved in a physical altercation on school property;
- 11% injured with a weapon on school property;
- 8% carried a weapon on school property.

Again, male students report all of these behaviors at a higher rate than female students.

**Figure 4: Risky Behaviors Among Central Indiana Youth**

![Graph showing risky behaviors among Central Indiana youth](image)

Source: CDC YRBSS.

**Likely Future Developments**

Homicide fatalities and motor vehicle fatalities together accounted for 37.90% of Central Indiana’s injury and violence fatalities in 2005. The fatality rate for motor vehicle accidents shows an upward trend from 2000 to 2005. A linear trend could mean that the motor vehicle fatality rate will increase from 13.08 per 100,000 persons in 2005 to 13.51 per 100,000 persons in 2010. Clearly, both of these are important areas to address to reduce fatalities due to injury and violence. The rate of fatalities due to falls is increasing in Central Indiana, likely due to the increasing older adult population. Finally, while the suicide rate in Central Indiana has dropped below national levels, this is an area that has been a problem in the past. Prevention efforts should remain in place to keep suicide rates in Central Indiana from increasing to previous levels.

**Community’s Capacity to Address Present and Future Conditions / Recommendations**

**Ensuring Responsibility Among Young Drivers**

The 2008 Indiana General Assembly passed House Bill 1112 which formed a study committee on laws pertaining to Indiana’s teen drivers. Additional restrictions to be considered include:

- increasing the age at which a youth can obtain a learning permit after having taken a driver’s education course from 15 years to 15 years and six months;
- increasing the time learner’s permit holding time from two months to six months;
- restricting nighttime driving and driving with passengers; and
- increasing the age at which youth can obtain a probationary driver’s license.
The prevention of injuries and violence is a public health issue that affects individuals and victims, local communities, and society as a whole. Preventing injuries and violence will reduce costs of human suffering, loss of life, medical care, rehabilitation, and lost income and opportunities. Following are recommendations for preventing injury and violence in Central Indiana:

<table>
<thead>
<tr>
<th>Where We Should Be</th>
<th>Priority</th>
<th>How to Get There</th>
<th>Financial Resources Requirements / Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public Policy Advocacy</td>
<td>Community Education</td>
</tr>
<tr>
<td>Indiana implements policies that assure appropriate levels of supervision and restrictions for young drivers to reduce driving related injuries and deaths.</td>
<td>Critical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community organizations increase violence prevention efforts with an emphasis on young males, especially young, Black males who are at high risk for being victims of homicide.</td>
<td>Critical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community organizations increase education efforts for drivers, especially young drivers, about the risks, consequences and responsibilities of driving, including the links between alcohol and driving deaths.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firearm users adhere to community standards for legal and safe gun possession.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Endnotes


2 Ibid.


4 Ibid.

5 Ibid.

6 Ibid.

7 Ibid.

8 Ibid.

9 Ibid.

10 Ibid.

11 Ibid.


13 Centers for Disease Control and Prevention. CDC Wonder Compressed Mortality File.

14 Centers for Disease Control and Prevention. Welcome to WISQARS.

15 Centers for Disease Control and Prevention. CDC Wonder Compressed Mortality File.

16 Centers for Disease Control and Prevention. Welcome to WISQARS.


18 Ibid.


21 Ibid.


23 Ibid.


26 Centers for Disease Control and Prevention. CDC Wonder Compressed Mortality File.

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Lead poisoning, identified by having greater than 10 micrograms of lead per deciliter of blood in one’s body, is a significant concern for children under 6 years of age. High levels of lead ingestion can cause damage to the kidneys, nervous system, and brain. Particularly in children, lead poisoning may cause hearing, behavioral and learning problems. Although a 1978 ban prohibits the use of lead in new paint, children who live in older housing are still at risk, with low-income and minority children experiencing the greatest risk. Because of the serious health consequences related to lead poisoning, especially for young children, the U.S. Department of Health and Human Services (DHHS), as part of its Healthy People 2010 prevention initiative, recommended that by 2010, the blood lead levels of children in the nation should be zero. A second goal for Healthy People 2010 is to have at least 50% of all occupied pre-1950s homes tested for lead-based paint.1

The prevalence rate for lead poisoning is based on confirmed cases of lead poisoning in a community. A confirmed case of lead poisoning occurs when a child receives an initial result of high blood lead levels and this result appears again in a follow up blood test completed several days later. Because children may not return for follow up blood tests, the actual prevalence rate of lead poisoning is likely higher than what is officially reported. Data available from the Centers for Disease Control and Prevention (CDC) show that the prevalence of confirmed lead poisoning in children under the age of six has been decreasing steadily both nationally and in Indiana.2 Overall, the prevalence of lead poisoning in Indiana has consistently been lower than that of the nation; however, the national rate has decreased more significantly than the Indiana rate. As of 2006 data available from the CDC, the percent of children under six years of age who had elevated blood lead levels was 1.2% both in Indiana and in the nation.3
Currently, one million housing units in Indiana built before 1960 are considered to be at-risk for lead hazards. According to the Marion County Health Department, Center Township has the highest percent of homes built before 1980 and by far the highest prevalence of lead poisoning in children during 2000-2006. Data from the Indiana State Department of Health (ISDH) for 2005, 2006 and 2007 for the six counties in the UWCI service area show that of all six counties, Marion County was the only county to have a significant number of confirmed cases of lead poisoning across all three years. During 2007, the prevalence of lead poisoning in Marion County was similar to that of Indiana. Data on unconfirmed cases of lead poisoning in Marion County for 2005 through 2007 show that approximately 9%-10% of all children tested had elevated blood lead levels.

Response Systems

A number of local, state, and federal agencies have become involved in reducing the threat of lead poisoning throughout Central Indiana. Federally, DHHS requires that children 12 and 24 months old receiving Medicaid services be given a blood test for lead. If a child is 3-6 years of age, on Medicaid, and has no history of a lead test, a blood lead test is also required.

Statewide, ISDH has developed a comprehensive lead poisoning elimination plan that includes:

- Increasing the resources available for lead removal programs and providing financial resources to help families of lead poisoned children move to new homes.
- Developing an incentive program for property owners found to have lead in their buildings that will help them defray the cost of cleanup.
- Creating a centralized database for housing units that have been tested and cleaned.
- Linking data collected on lead to other relevant data sources.
- Raising awareness about lead poisoning among families, business owners, real estate brokers, and anyone who deals in the housing market.
- Increasing awareness about lead hazards for contractors and painters.
- Increasing awareness of lead issues among state policymakers.
- Providing routine screening and follow up through Hoosier Healthwise.
- Increasing the testing rate of at risk children and providing these children with case management services.
- Increasing the number of licensed risk assessors, abatement contractors, workers and supervisors and increasing the number of workers trained in lead-safe work practices.
- Developing appropriate lead-related law enforcement.
- Increasing the number of units inspected and made lead safe.

The U.S. Department of Housing and Urban Development awarded Indiana Black Expo, Inc. (IBE) a Lead Outreach Program Grant to develop a statewide marketing campaign and community programs to assist in decreasing lead exposure rates. IBE in partnership with the ISDH, the Marion County Health Department, and other state organizations offers free lead testing kits at sites throughout the state.

Improving Kids' Environment (IKE) is a nonprofit coalition based in Indianapolis. IKE works to improve children’s health by reducing environmental threats to children. IKE is actively involved in lead poisoning and lead abatement through advocacy and raising awareness. IKE regularly provides information related to recalls of lead-based products, provides homeowners with information regarding contractors trained in lead removal, works to encourage bans on tainted toys, and publishes regular newsletters outlining statewide developments related to lead contamination in Indiana.
Factors Affecting Current Conditions

The 2008 Indiana General Assembly enacted the Indiana Childhood Lead Poisoning Prevention Act (ICLPPA) that includes new, proactive provisions that will help protect Indiana children from the dangers of lead poisoning. It provides for new penalties for individuals failing to comply with ISDH’s blood lead test reporting requirements, providing ISDH greater authority to require complete information so that children with elevated blood lead levels can be located quickly and given the help and services they need.\(^{11}\)

ICLPPA also prohibits retail stores in Indiana from selling products that have too much lead compared to federal guidelines or the judgment of ISDH. It requires ISDH to develop a “Lead Safe Work Practices” training program that would be required for contractors, remodelers and painters who will be disturbing lead-based paint in houses built before 1978. Unsafe work practices, such as scraping and sanding old paint, are a key cause of lead poisoning. ICLPPA creates a Lead-Safe Housing Advisory Council charged with developing long-term recommendations for addressing childhood lead poisoning prevention. Further issues related to lead poisoning prevention, testing and abatement will be studied over Summer 2008.\(^{12}\)

Recalls of Chinese-made Products

The most common way children ingest lead is by eating chips of lead-based paint. However, lead can often be found in other products. For example:\(^{13}\)

- 35% of toys imported from foreign countries have been found to contain lead-based paint. Currently, 138 toys found to have high levels of lead have been recalled by their manufacturers.
- 39% of imported children’s jewelry tested has been found to contain lead. Seventy-three children’s jewelry and accessory items are currently on a national recall list for contaminated products.
- Lead paint has been found on various makes and models of imported wood and metal children’s furniture.
- Metal parts painted with lead-based paint have been found on children’s school supplies like decorated paper clips, pencil pouches and spiral-bound notebooks.
- Lead has even been found in children’s clothing on snaps, zipper pulls, buttons and in fabrics which were dyed with lead-based dye.
- Lead has not been banned in certain plastics products and can be released when these products are washed in detergent. These plastics can be found in some brands of food containers, cups or water bottles.

A current list of all recalled lead-tainted products can be found at http://www.cdc.gov/nceh/lead/Recalls/allhazards.htm.

Likely Future Developments

A review of statewide trends would indicate that fewer children are testing positive for elevated lead levels in their blood. It is anticipated that the ICLPPA legislation will bring about further improvement and potentially limit the amount of lead available to children in toys and other similar items.

Communities Capacity to Address Present and Future Conditions/Recommendations

The state of Indiana has clearly recognized that lead contamination is a threat to Indiana’s children and to the environment. Every year, the percentage of children poisoned by lead at both the state and local level continues to drop. Gradually, Indiana is moving closer to meeting the goals set by Healthy People 2010. Though capacity to address all the issues related to lead contamination may currently be lacking, the passage of ICLPPA and subsequent recommendations related to lead poisoning prevention, testing and abatement will likely serve to create a number of new resources.
All facilities where children spend significant amounts of time, including homes, childcare and educational settings, are free from lead poisoning hazards.

**Endnotes**


3. Ibid.

4. Marion County Health Department. Marion County Needs Assessment. Indianapolis, IN: Marion County Health Department; 2008.

5. Ibid.


12. Ibid.


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INTRODUCTION

The concept of mental health can be difficult to describe. It is often thought of as the absence of mental illness, but it is actually much broader. Mental health can be defined as “the successful performance of mental function, resulting in productive activities, fulfilling relationships, and the ability to adapt to change and to cope with adversity. From early childhood until late life, mental health is the springboard of thinking and communication skills, learning, emotional growth, resilience and self-esteem”.

Mental disorders are health conditions characterized by alterations in thinking, mood or behavior (or some combination thereof) associated with distress and/or impaired functioning; and mental illness is the term that refers collectively to all diagnosable mental disorders.

Approximately 20% of the U.S. population is affected by mental illness in any given year, most commonly by depression. More than 19 million U.S. adults suffer from depression. Clinical depression is the leading cause of disability in the country and the cause of more than two-thirds of suicides each year.

The direct and indirect costs of mental illness in the United States are high. In 1996, about $69 billion was spent on the direct treatment of mental disorders, and in 1990 (the most recent year for which estimates are available) indirect costs were nearly $79 billion. This includes costs due to morbidity ($63 billion), mortality ($12 billion), and loss of productivity (almost $4 billion). Considering its impact on the public, the U.S. Department of Health and Human Services identified mental health as a leading health indicator in its publication Healthy People 2010, with the goal to improve mental health and ensure access to appropriate, quality mental health services.

Mental disorders vary in severity and in their impact on a person’s life. The term serious mental illness (SMI) refers to having at least one long-lasting (chronic) diagnosable mental/psychological disorder that results in functional impairment and substantially interferes with or limits one or more major life activities. Mental illnesses that can be enormously disabling include schizophrenia, major (clinical) depression, bipolar disorder, obsessive-compulsive disorder (OCD) and panic disorder.

Like adults, children and adolescents can suffer from psychological disorders. However, young people who are diagnosed with a disabling mental illness are classified as having a serious emotional disturbance (SED) and not a serious mental illness (SMI). Dual diagnosis and co-occurring disorder are terms used to describe the frequent co-occurrence of a mental disorder and some form of substance use disorder (alcohol and/or drug abuse/addiction).
CURRENT CONDITIONS

The annual prevalence estimate for mental illness in the general U.S. population is 20%. This means that almost 1.3 million Hoosiers, including more than 320,000 persons from Central Indiana, had a mental disorder in 2007.9,10

Adult Prevalence of Mental Illness

The adult prevalence estimate for mental illness is also 20%, i.e., almost 920,000 persons ages 18 and older in Indiana, and more than 220,000 in Central Indiana, were affected in 2007. Furthermore, 5.4% of adults suffer from serious mental illness (SMI), or about 250,000 Hoosiers, including over 60,000 persons from Central Indiana. The prevalence of co-occurring disorder is about three percent. Therefore, an estimated 137,000 adults in Indiana, including 33,000 in Central Indiana, may be diagnosed with both a mental disorder and a substance use disorder in any given year (see Figure 1). 11,12 According to the Indiana Division of Mental Health and Addiction, almost one-fourth of adults with SMI also have a substance use disorder. This means that over 57,000 adults in Indiana have a serious mental illness and a substance use disorder, including 14,000 persons from Central Indiana.13

Youth Prevalence of Mental Illness

The annual prevalence of mental disorders in children and adolescents is not as well documented as that for adults. About 20% of children are estimated to have mental disorders with at least mild functional impairment. However, children and adolescents with more severe functional limitations are known to have a “serious emotional disturbance” (SED).17 The prevalence of children and adolescents, ages 9 to 17, with SED is estimated to be 10% for youths with a Global Assessment of Functioning (GAF) score of <60 and six percent for youths with a GAF score of <50.18

Additionally, data from the National Survey on Drug Use and Health reveal that about 12.5% of adults in Indiana report having experienced serious psychological distress in the past year; the percentage was higher among 18- to 25-year olds (19.9%). Almost nine percent of Hoosiers ages 12 and older have had at least one major depressive episode in the past year.16

Figure 1: Estimated Number of Adults in Central Indiana Who had a Mental Illness (MI), a Serious Mental Illness (SMI), or Co-occurring Disorder (COD) in 200714,15

Global Assessment of Functioning (GAF) Score

Social, occupational and psychological functioning of adults and children can be rated by mental health clinicians on a numeric scale (0 through 100). The assessment of global functioning is incorporated in the multi-axial design of the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders, 4th Edition, Text Revision (DSM-IV-TR) as Axis V. Lower GAF scores translate into lower overall functioning.

**GAF Score 60-51:** Moderate symptoms OR any moderate difficulty in social, occupational, or school functioning.

**GAF Score 50-41:** Serious symptoms OR any serious impairment in social, occupational, or school functioning.
Table 1: Estimated Number of Youths Ages 9 to 17 in Central Indiana with Serious Emotional Disturbance (SED) in SFY 2007

<table>
<thead>
<tr>
<th>County</th>
<th>GAF &lt;60</th>
<th>GAF &lt;50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone County</td>
<td>711</td>
<td>427</td>
</tr>
<tr>
<td>Hamilton County</td>
<td>3,310</td>
<td>1,986</td>
</tr>
<tr>
<td>Hancock County</td>
<td>810</td>
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<tr>
<td>Hendricks County</td>
<td>1,657</td>
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<tr>
<td>Johnson County</td>
<td>1,751</td>
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<tr>
<td>Marion County</td>
<td>12,384</td>
<td>7,430</td>
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<tr>
<td>Morgan County</td>
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<td>584</td>
</tr>
<tr>
<td>Shelby County</td>
<td>625</td>
<td>375</td>
</tr>
<tr>
<td>Central Indiana</td>
<td>22,221</td>
<td>13,333</td>
</tr>
<tr>
<td>Indiana</td>
<td>85,791</td>
<td>51,470</td>
</tr>
</tbody>
</table>

Mental Health Facts

- In Indiana, suicide is the 11th leading cause of death across all age groups. However, among 25- to 34-year olds, suicide is the second leading cause of death.
- It is estimated that 80 to 90% of people who die by suicide are suffering from a mental disorder.
- Depression occurs twice as frequently in women as in men. Left untreated, depression can lead to suicide.
- Schizophrenia affects about one percent of the U.S. population.
- Approximately 20 to 25% of the single adult homeless population suffers from some form of severe and persistent mental illness.
- Blacks are more likely to experience a mental disorder than Whites, but they are less likely to seek treatment.
- Fewer than half of adults and only one-third of children with a diagnosable mental disorder get help.
- Early identification and treatment of mental illness is of vital importance. The best treatments for serious mental illnesses today are highly effective; between 70 and 90% of individuals have significant reduction of symptoms and improved quality of life with a combination of pharmacological and psychosocial treatments and supports.
- It is estimated that people with SMI die at least 25 years earlier than people without SMI.

Role and Response of the Human Services System

Funding issues for mental health services are similar to the issues discussed in the section on substance abuse and addictions. Public programs include Hoosier Assurance Plan (HAP), Healthy Indiana Plan (HIP), Hoosier Healthwise, Medicaid and Medicaid Select, and Medicare. HAP, which is the primary funding mechanism for Indiana’s Division of Mental Health and Addiction to pay for mental health services in individuals at or below the 200% federal poverty level, served almost 51,000 adults with SMI, roughly 30,000 children with SED, and more than 5,000 adults with co-occurring disorder in 2007. The totals for Central Indiana follow.

Table 2: Number of Income Eligible Consumers Served With SMI, SED, or Co-occurring Disorder in SFY 2007

<table>
<thead>
<tr>
<th>County</th>
<th>Seriously Mentally Ill Adults (SMI)</th>
<th>Seriously Emotionally Disturbed Children (SED)</th>
<th>Co-occurring Disorder (Adults, Serious Mental Illness with Chronic Addiction)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>345</td>
<td>179</td>
<td>30</td>
</tr>
<tr>
<td>Hamilton</td>
<td>726</td>
<td>402</td>
<td>88</td>
</tr>
<tr>
<td>Hancock</td>
<td>189</td>
<td>101</td>
<td>26</td>
</tr>
<tr>
<td>Hendricks</td>
<td>439</td>
<td>263</td>
<td>29</td>
</tr>
<tr>
<td>Johnson</td>
<td>597</td>
<td>636</td>
<td>94</td>
</tr>
<tr>
<td>Marion</td>
<td>7,183</td>
<td>5,169</td>
<td>1,191</td>
</tr>
<tr>
<td>Morgan</td>
<td>493</td>
<td>311</td>
<td>12</td>
</tr>
<tr>
<td>Shelby</td>
<td>256</td>
<td>116</td>
<td>22</td>
</tr>
<tr>
<td>Central Indiana</td>
<td>10,228</td>
<td>7,177</td>
<td>1,492</td>
</tr>
<tr>
<td>INDIANA</td>
<td>51,049</td>
<td>29,655</td>
<td>5,726</td>
</tr>
</tbody>
</table>
Other Resources

- **Mental Health Services Locator** – The Substance Abuse and Mental Health Services Administration’s [Mental Health Services Locator](http://mentalhealth.samhsa.gov/databases) is an online database that provides comprehensive information about mental health services and resources in the United States. Information can be queried by state and city. According to the database, 65 providers/facilities offer mental health services in Central Indiana: four in Boone County, three in Hamilton County, two in Hancock County, four in Hendricks County, two in Johnson County, 45 in Marion County, three in Morgan County, and two in Shelby County. Treatment providers cover a range of services, including inpatient, outpatient, residential, and group homes.

- **National Alliance on Mental Illness (NAMI)** – Founded in 1979, NAMI is the largest grassroots organization for individuals with mental illness and their families. The national organization has affiliates in every state and in more than 1,100 local communities. NAMI’s primary activities include education/information, support, raising awareness, fighting stigma, and state and federal advocacy. Their helpline (1-800-950-6264) serves more than 4,000 callers per month. The local affiliate in Central Indiana is NAMI Indianapolis, available at 317.767.7653 and [www.namiindy.org](http://www.namiindy.org).

- **Mental Health America (MHA)** – MHA (formerly known as the National Mental Health Association) is the country’s leading nonprofit organization dedicated to helping all people live mentally healthier lives. The organization has more than 320 affiliates nationwide. Affiliates in Central Indiana include: MHA of Boone County in Lebanon, MHA of Hamilton County in Noblesville, MHA of Hendricks County in Avon, MHA of Greater Indianapolis in Indianapolis, and MHA of Morgan County in Mooresville. MHA affiliates typically provide community and school-based education and prevention programs. They may also offer direct crisis and suicide intervention services, provide adult guardianship services to people with a serious mental illness, operate group homes and advocate for public policy that improves prevention, care and treatment for people with mental illness.

Mental Health Wellness

In addition to treatment for serious mental illnesses, Central Indiana’s network of human services providers also includes resources for wellness related to optimal mental health, family dynamics and social functioning. Counseling services for individuals and families are available throughout the Indianapolis Metropolitan area through private for-profit and nonprofit practitioners. Service providers may include family service agencies, youth services providers, child welfare agencies, congregation based ministries and private practitioners. Some offer services a sliding fee scale basis based on household income.

Further, mental health advocacy organizations such as Mental Health America affiliates and other human services providers and community organizations offer community and school-based educational programs related to healthy living and mental health related topics, such as:

- Balancing work and life;
- Coping with stress;
- Coping with grief and loss;
- Coping with divorce;
- Healthy family living;
- Parenting;
- Adolescent and teen development;
- Positive relationship building education.

- **Crisis Intervention Teams (CIT)** – The CIT program is a police-based community effort to promote safety, understanding and service to the mentally ill and their families. Police officers are trained to handle the needs of people who are out of control due to mental illness and who, as a result, act in some manner that is disruptive to the community. The Indianapolis Metropolitan Police Department (IMPD) has joined in a partnership with Midtown Community Health Center and NAMI Indianapolis to reduce the number of people in the criminal justice system suffering from mental illness; decrease the potential for injury or death to people with mental illness as well as to law enforcement officers and other members of the community; and increase the number of people with mental illness who receive mental health treatment. So far, the CIT program has trained more than 600 IMPD officers.
Additionally, training has been provided to officers from the Airport Police, Butler University Police, Meridian Hills Police, Noblesville Police, Lafayette Police, Lawrence Police, and Warren Township School Police. Metropolitan Emergency Communications Agency and Wayne Township Medical personnel have also been trained. Independent studies have shown the effectiveness of programs such as CIT, in which collaborations between the criminal justice system, the mental health system, and the advocacy community plus essential treatment services reduce the inappropriate use of jails to house persons with acute symptoms of mental illness. Individuals may access CIT services by dialing 9-1-1 and requesting a CIT officer.

- **Connect2Help** – Connect2Help is the 2-1-1 phone number that connects callers from Central Indiana with counseling, support groups, addiction and other mental health programs. The helpline has been accredited by the American Association of Suicidology. See Figure 2 for distribution of calls by crisis call category.

### Figure 2: Connect2Help 2006 Crisis Call Categories

![Figure 2](image_url)

**Unmet Service Needs**

According to national data, only 44% of U.S. adults suffering from serious psychological distress (SPD) received some type of treatment. Of all adults suffering from SPD, 39% received prescription medication, 27% received outpatient treatment, and 4% received inpatient treatment in 2006 (respondents could report more than one type of treatment).

### Treating Mental Illness

A variety of treatment approaches is being utilized in the United States to care for clients with mental illness. People who receive treatment mostly do so in a community-based outpatient setting. However, there are times when a person becomes so ill that they are at risk of hurting themselves or others and hospitalization becomes necessary. During that time, the individual can be closely monitored in an inpatient setting, be diagnosed, and receive necessary treatments. In- and out-patient services can include a host of interventions, such as psychotherapeutic medication, counseling sessions (group or individual therapy), support groups, case management, housing/group homes, and more. The engagement of family and other support systems in a client’s care results in better outcomes.

Counseling, or “talk therapy,” in general, has been found effective in dealing with mental illness. It can be used by itself or in combination with medication. Therapists may use different counseling approaches, including insight-oriented and cognitive/behavioral-oriented therapies. For the most effective treatment, evidence-based practices tailored to the type of mental disorder (e.g., depression, anxiety disorder, schizophrenia) should be utilized, since certain counseling approaches work better for some mental disorders than for others. However, other factors play a role in treatment outcomes as well, such as therapist behaviors (empathy, warmth, positive regard and genuineness) and client characteristics.

Comprehensive systems of care, especially for individuals with serious mental illness (SMI), are efficient and cost-effective ways to provide wrap-around services without hospitalization. Assertive Community Training (ACT) is a comprehensive treatment model designed for adults with SMI. The intervention has shown to be efficient, particularly in reducing hospitalization and maintaining stable housing. Currently, there are nine ACT sites in Central Indiana.
The percentage of individuals at or below the 200% federal poverty line that are being served by the Division of Mental Health and Addiction’s HAP plan declined from 2005 to 2007 in Indiana. The penetration rate for adults with SMI decreased from 71.7% in 2005 to 54.9% in 2007; similar rate decreases were evident for children with SED (from 91.1% to 63.6%) and adults with co-occurring disorder (from 46.1% to 41.5%). Declines in penetration rates also occurred in Central Indiana: from 54.6% in 2005 to 40.9% in 2007 for adults with SMI; from 95.1% to 63.4% for children with SED; and from 40.7% to 40.3% for adults with co-occurring disorder.42 Table 2 displays the penetration rate by county for Central Indiana.

Table 2: Indiana Penetration Rate – Percentage of Eligible Population (at or below 200% of the Federal Poverty Line) that was Served by Indiana Division of Mental Health and Addiction in SFY 2007

<table>
<thead>
<tr>
<th>Adults with SMI</th>
<th>Children Ages 9-17 with SED</th>
<th>Adults with Co-occurring Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone County</td>
<td>96.9%</td>
<td>80.3%</td>
</tr>
<tr>
<td>Hamilton County</td>
<td>67.5%</td>
<td>53.6%</td>
</tr>
<tr>
<td>Hancock County</td>
<td>48.1%</td>
<td>43.7%</td>
</tr>
<tr>
<td>Hendricks County</td>
<td>64.6%</td>
<td>64.3%</td>
</tr>
<tr>
<td>Johnson County</td>
<td>55.5%</td>
<td>96.1%</td>
</tr>
<tr>
<td>Marion County</td>
<td>35.4%</td>
<td>61.8%</td>
</tr>
<tr>
<td>Morgan County</td>
<td>71.9%</td>
<td>74.9%</td>
</tr>
<tr>
<td>Shelby County</td>
<td>58.0%</td>
<td>43.1%</td>
</tr>
<tr>
<td>Central Indiana</td>
<td>40.9%</td>
<td>63.4%</td>
</tr>
<tr>
<td>Indiana</td>
<td>54.9%</td>
<td>63.6%</td>
</tr>
</tbody>
</table>

The National Alliance on Mental Illness (NAMI) published a state-by-state “report card” on adult mental healthcare systems in the public sector. The report is intended as a starting point—a tool for policymakers to improve their states’ mental healthcare system. Based on this report, Indiana received a low grade of “D-.” NAMI identified the following urgent needs for Indiana’s mental healthcare system:

- Caution on scope and speed of healthcare system changes, especially within the state’s hospital system;
- Greater transparency;
- Consumer and family participation in decisions; and
- Waiting list reduction for community services.44

Based on comments from focus groups that UWCI conducted throughout Central Indiana, the following service needs were identified (much of the information provided is applicable to mental health and substance abuse services and may, therefore, overlap):

- Hispanic Services – The Hispanic population in Central Indiana has increased in recent years, but bilingual, culturally competent service providers are still rare. There is a need for bicultural advocates who not only interpret but also provide cultural competency training and support.

- Continuity of Care – Mental health and illness are not polar opposites but can be thought of as points on a continuum45; therefore, continuity of care from crisis management through maintenance is important. Additionally, primary care providers might not be trained to recognize symptoms of mental illness in their patients. By improving their screening capacity, many clients with mental health issues could be diagnosed properly and receive appropriate treatment.

- Community-based Services – Evidence-based, community-based mental health services are necessary to provide efficient and cost-effective treatment.

- Coordination / Collaboration – Coordination and collaboration between programs and among agencies is necessary to provide a comprehensive system of care.

- Public Transportation and Childcare – Many clients find it difficult or even impossible to access treatment services because they do not have transportation or childcare available to them.

Factors Influencing Current Conditions

Public funding for mental health services is still available to eligible persons; however, due to the Deficit Reduction Act of 2005, the availability of care for low-income adults and children with mental health conditions has been greatly reduced. The Act is expected to generate net reductions of $4.8 billion over the next five years and $26.1 billion over the next 10 years from Medicaid.46
Additionally, many individuals with mental illnesses are un- or underinsured. Some insurance companies do not cover mental health services or place arbitrary and discriminatory caps on benefits for serious brain disorders like bipolar disorder, schizophrenia and others. The disparity between reimbursement for mental health conditions and medical/surgical conditions leaves individuals with SMI at a distinct and unfair disadvantage.

However, funding issues are not the only barriers to accessing treatment. Fear of stigma, and the resulting discrimination, often discourages individuals and their families from getting the help they need. Stigma can lead to inadequate insurance coverage for mental health services; fear, mistrust, and violence against people living with mental illness and their families; family and friends turning their backs on people with mental illness; and general prejudice and discrimination.

Despite civil rights laws, such as the Americans with Disabilities Act, people with mental illnesses often experience discrimination in the workplace, education, housing and healthcare. Also, racial and ethnic disparities regarding mental health conditions and treatment exist. Blacks are less likely to seek treatment than their White counterparts; and Hispanics in need of treatment often will not access the service system because of language barriers and fear of deportation. The Surgeon General reported that minorities have less access to, and availability of, mental health services; are less likely to receive needed mental health services; often receive a poorer quality of mental health care; and are underrepresented in mental health research.

Another factor that is influencing the current condition is the aging workforce. The community’s capacity to provide services is dependent on the number of staff. It is speculated that a shortage of treatment providers will occur as “Baby Boomers” retire.

Finally, state Medicaid regulations regarding eligibility reviews can post a barrier to receiving proper mental health treatment. Indiana currently reviews Medicaid eligibility for mental health services every 90 days, and sends most eligibility communication via U.S. mail. Transient people that do not have a stable postal address therefore often lose eligibility for lack of submitting required renewal paperwork, which can result in treatment disruptions.

Increasing Community Capacity / Recommendations

The Mental Health Parity Act of 2007 (S. 558)

The Mental Health Parity Act of 2007 is a bill intended to provide parity between health insurance coverage of mental health benefits and benefits for medical and surgical services. S. 558 is an extension of the Mental Health Parity Act of 1996 (P.L. 104-204), which only provided parity for annual and lifetime limits between mental health coverage and medical/surgical coverage. However, the new bill will expand parity by including deductibles, co-payments, out-of-pocket expenses, coinsurance, covered hospital days, and covered out-patient visits.

“Parity” articulates the basic principle of mental illness being “a disease like any other.” As such, the objective is to require insurance coverage that is equal to, but not superior to, other medical conditions such as cancer, diabetes or heart disease. Parity is not a benefit or treatment service mandate, but rather a coverage condition; i.e. if mental illness is a policy benefit, the policy may not impose limits or conditions that do not apply to other diseases.

The bill has passed both the U.S. Senate and House and is now under consideration in conference committee.

The Deficit Reduction Act of 2005 (S. 1932) and Protecting the Medicaid Safety Net Act of 2008 (H.R. 5613)

On February 8, 2006, President Bush signed the Deficit Reduction Act of 2005, also known as the budget reconciliation act, into law. The Act is expected to generate $99 billion in federal entitlement reductions over the 2006 to 2015 period. This includes net reductions of $26.1 billion over the next 10 years from Medicaid. Many of the proposed policy changes would result in limited healthcare coverage and access to services for low-income beneficiaries.
“The cuts to Medicaid target those who need help the most: children, and the mentally and physically disabled. By eliminating preventative healthcare programs and assistance, there could be a devastating effect on the long-term healthcare of Medicaid patients. This would only lead to higher costs in the future, and put the health of millions at risk.”
(Congressman Tim Murphy)\(^{51}\)

In March 2008, Representatives John D. Dingell (D-MI) and Tim Murphy (R-PA) introduced Protecting the Medicaid Safety Net Act of 2008. This legislation would place a temporary one-year moratorium on seven administration-imposed Medicaid regulations. These new Medicaid regulations establish restrictive new policies and vague new standards for reimbursement that will dramatically decrease access to crucial services. H.R. 5613 would delay implementation and enable Congress to carefully consider the numerous and far-reaching policy changes included in these regulations.\(^{52}\)
To overcome the barriers and provide fair and equal access to care, the following is suggested:

<table>
<thead>
<tr>
<th>Where We Should Be</th>
<th>Priority</th>
<th>How to Get There</th>
<th>Financial Resources Requirements / Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public and private health care payors eliminate reimbursement rate and policy coverage disparities between mental health and medical/surgical conditions.</td>
<td>Critical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased treatment capacity (facilities/providers, staff, and programs) reduces delays in services.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public education on mental health issues and increasing awareness in the community destigmatizes mental illness and increases rates of access to care.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education on mental health issues sponsored by groups such as the Minority Health Coalition, and the availability of bilingual and culturally competent staff, eliminate racial/ethnic disparities in access to mental health care.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Integration of physical health care, mental health care and substance abuse treatment results in increased well-being for Central Indiana residents.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are adequate Crisis Intervention Team (CIT) units in local police and sheriff's departments, and first-responders such as law enforcement, fire departments, and emergency medical technicians receive CIT training.</td>
<td>Desirable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Endnotes


2 Ibid.


12 U.S. Census Bureau. Population finder and Indiana Division of Mental Health and Addiction. Indiana Estimated Prevalence of Adults (Age 18 Years and Over) with Co-occurring Disorder (Serious Mental Illness with Chronic Addiction) by Region and County, SFY 2007. n.d.

13 Indiana Division of Mental Health and Addiction. Indiana Estimated Prevalence of Adults (Age 18 Years and Over) with Co-occurring Disorder (Serious Mental Illness with Chronic Addiction) by Region and County, SFY 2007. n.d.


19 Ibid.


22 National Alliance on Mental Illness. Homepage.

23 Ibid.


29 Indiana Division of Mental Health and Addiction. Indiana Number of Consumers Served Report by Region and County, SFY 2007. n.d.

30 Ibid.

31 Substance Abuse and Mental Health Services Administration. Mental Health Services Locator. n.d. [cited April 7, 2008]; Available from: http://mentalhealth.samhsa.gov/databases/.

32 National Alliance on Mental Illness. Homepage.


37 Ibid.

38 Substance Abuse and Mental Health Services Administration. National Survey on Drug Use and Health.


43 Indiana Division of Mental Health and Addiction. *Indiana Penetration Rate Report by Region and County, SFY 2007*. n.d.

44 National Alliance on Mental Illness. *Homepage*.


47 National Alliance on Mental Illness. *Homepage*.


49 National Alliance on Mental Illness. *Homepage*.


52 Ibid.
Health – Overweight and Obesity

The Health chapter is generously sponsored by Kroger Pharmacy.
INTRODUCTION

The Centers for Disease Control and Prevention (CDC) have recognized that the issue of overweight and obesity is a growing public health concern for adults and children in the United States. Currently, the CDC uses a person’s body mass index (BMI) to define overweight or obesity. BMI is a measure of body fat. For adults, a BMI in the range of 25% to 29.9% is considered overweight while a BMI at or above 30% is considered obese. For children and young people under the age of 20, the level of overweight is determined by where the BMI falls on typical age growth charts. A child or young person is considered at risk of being overweight if his or her BMI falls within the 85th to less than the 95th percentile for his or her age. A child or young person is considered overweight if his or her BMI is equal to or greater than the 95th percentile for his or her age. The CDC does not recognize a category of obesity for young people under the age of 20. Whether one becomes overweight or obese is due to a number of factors over which individuals may or may not have control including level of physical activity, diet, attitudes about health and body image, the physical environment and genetics.¹

Adults and children who are overweight or obese run the risk of developing a number of serious health problems. For adults, some of the most common health problems include hypertension, high cholesterol, Type II diabetes, coronary heart disease, stroke, gall bladder disease, osteoarthritis, sleep apnea and other respiratory problems, and cancers of the endometrium, breast and colon. Overweight children are more likely to have at least one risk factor for cardiovascular disease, more likely to have asthma, more likely to have glucose intolerance or Type II diabetes and more likely to have sleep apnea than are normal weight children. Young people who are overweight often become the targets of social discrimination, which can lead to long-term social and emotional difficulties.²

Due to the potentially severe health-related consequences of being overweight or obese, the Department of Health and Human Services (DHHS) has included reducing the prevalence of overweight and obesity as one of the goals of the Healthy People 2010 disease prevention initiative. By 2010, the DHHS would like the proportion of adults nationally who are obese to be no more than 15% and the proportion of children and adolescents nationally who are overweight to be no more than 5%.³

CURRENT CONDITIONS

In order to reach the goals outlined by the DHHS for 2010, it is clear that the U.S. and the Central Indiana area in particular have a long way to go. According to a national survey of health behaviors completed in 2006, 35.5% of adults in the U.S. are considered overweight.⁴ Data from the same survey show that
35% of Indiana adults and 35.2% of adults in the Indianapolis metropolitan area are currently overweight. Similar data collected for young people in 2005 indicate that within the U.S., 13.1% of children and young adults in grades 9 through 12 are overweight. This percentage is similar to that for ninth- through twelfth- graders in Indiana 15%. Within Marion County, the percentage of young people in this age group who are overweight is significantly higher at 20.3%.

The percentage of adults considered obese has been steadily increasing on a national, state and local level. Based on data collected in 2006, 25.1% of adults nationally are obese. Within Indiana, 27.8% of adults have BMIs in the obese range while in Central Indiana, 26% of adults are considered obese.

Table 1: Percent Overweight and Obese by Gender in the Indianapolis-Carmel MSA, 2006

<table>
<thead>
<tr>
<th></th>
<th>Percent Overweight BMI</th>
<th>Percent Obese BMI</th>
<th>Total Percent Overweight/Obese BMI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>42.3</td>
<td>23.9</td>
<td>66.2</td>
</tr>
<tr>
<td>Women</td>
<td>29.0</td>
<td>30.7</td>
<td>59.7</td>
</tr>
</tbody>
</table>

Data from the 2005 Marion County Obesity Survey indicate that when compared to Whites (33.4%) and Blacks (33.7%), a higher percentage of Latinos (38.8%) were overweight. A higher percentage of black adults in Marion County were considered obese (34.1%) when compared to white (23.4%) and Latino adults (20.8%). When race and gender are considered together, adult Latino males were more likely to be overweight (49%) than either white (42%) or black males (38%). The percentage of adult black women who were overweight (30%) was slightly higher than that reported by white (28%) or Latina women (27%). The percentage of adult black women who were obese was higher than any other group (39%).

Gender and Racial Disparities in Overweight and Obesity

In Central Indiana, there are significant differences by gender and racial groups in the percentage of adult residents who are considered overweight or obese. In the Indianapolis metropolitan area during 2006, more adult men than women were overweight, but more adult women than men were obese.
In a recent report regarding childhood obesity, the Marion County Health Department reported that in 2005:

- Twenty-two percent of the measured Marion County children were overweight.
- Eighteen percent were at risk of overweight.
- One percent were underweight.
- The remaining 58% were in the normal BMI range for their age and gender.
- The heaviest group of students was Hispanic males with 31% overweight, 20% at risk of becoming overweight and one percent underweight.\(^\text{15}\)

**Income, Education and Obesity**

The percentage of adults who are obese in Central Indiana is inversely related to both income and education. During 2006, 22.6% of adults with a gross annual income of $75,000 were obese while 43.5% of adults with a gross annual income of less than $10,000 were obese. Similarly, 57.1% of adults who completed only an elementary school education were obese while the percentage of college graduates considered obese was 24.9%.\(^\text{16}\)

**Figure 3: Percent of Obese Adults in Marion County by Income**

The results of these comparisons indicate that minorities and particularly black women and younger Hispanic males in the Central Indiana area as well as individuals with low incomes and lower levels of education may be at a much higher risk of becoming obese and developing serious obesity-related health consequences. Interventions need to be developed to help target these at risk groups.

**Response Systems**

Several initiatives currently serve the Central Indiana area that work to prevent or reduce obesity and overweight by helping children, adolescents, and adults learn about proper diet, exercise, and other ways to maintain a healthy weight. These initiatives include:

- **Fit City** provides children and adolescents with messages about obesity, good nutrition, physical activity and healthy weight, and prompts them to be more active and eat healthier. One major goal of Fit City is to work with communities that are traditionally underserved and at increased risk.
- **InShape Indiana** is a public health program that supports individuals and groups to make healthy lifestyle choices in nutrition, physical activity and tobacco use by providing supportive resources and recognition for success. The program works to connect residents to programs, services and events that are offered by organizations and agencies throughout Indiana.
- **Indiana Action for Healthy Kids** primarily focuses on improving the health and educational performance of children through better nutrition and physical activity in Hoosier schools. The initiative was developed as a direct response to the state’s epidemic of overweight, sedentary and undernourished children and adolescents. The initiative supports healthy schools in producing healthy students, and healthy students are better able to learn and achieve their true potential.
- **First Place Weight Management** is a faith-based program offered by the Indiana Minority Health Coalition and promotes healthy weight management through education, lifestyle and behavioral changes.
- **Operation Fit Kids** is a school-based program offered to third-, fourth- and fifth-graders by the Indiana Minority Health Coalition. Operation Fit Kids provides education on healthy eating, appropriate snacks, and the importance of fitness and exercise to overall health.
- **Coordinated School Health Program (CSHP)**, operated by the Indiana Department of Education and the Indiana State Department of Health, is a school-based multi-component program that improves children’s health and removes barriers to learning. CSHP works to improve overall...
health by providing students with health education, physical education, health services, well balanced nutrition, a healthy and safe school environment and mental health services. It also encourages families and the community at large to help students achieve better health.

Many low cost or free programs exist in the Central Indiana area which are sponsored by hospitals and other health-related organizations all of which are working to help Hoosiers improve their fitness and lose weight:

- 10,000 Steps;
- Aerobic Aquatic Fitness;
- Committed to Kids;
- Community Nutrition/Obesity Prevention Program (ISDH);
- Fight the Fat;
- Hip Hop Program;
- Indianapolis Senior Center Seasoned Slimmers;
- Jewish Community Center physical education;
- LEARN weight management;
- Lighten Up Indiana weight management;
- NIFS Life Strides Fitness Center;
- Nutrient Knowledge;
- TOPS (Take Off Pounds Sensibly);
- Total Body Conditioning; and
- YMCA of Greater Indianapolis.

Additional resources exist throughout Central Indiana that residents can use to pursue increased fitness and reduce weight. These include a number of community and neighborhood parks, nature preserves with hiking trails, and two urban trails, the Monon in Marion County and the Pennsy Rail Trail in Morgan County.

Nationally, in 1999, the CDC launched the State-Based Nutrition and Physical Activity Program to Prevent Obesity and Other Chronic Diseases (NPAO). NPAO currently works in 28 states to build lasting and comprehensive efforts to combat obesity and other chronic diseases through a variety of nutrition and physical activity strategies. States receiving NPAO funding use the social-ecological model to understand obesity in their state and serves to remind states to look at all the levels of influence that can be addressed to support long-term, healthful lifestyle choices.\(^{17}\)

**The Social-Ecological Model for Changing Obesity**

The social-ecological model approaches obesity by reviewing five areas that can influence an individual's eating and activity decisions:

- **Individual level** – Addressing obesity starts by changing an individual's daily behaviors related to eating and exercise. To do this, individuals need to change their attitudes and beliefs about nutrition and physical activity. Individuals can get new information and guidance from family, schools and community organizations.

- **Interpersonal groups** – People belong to many social groups, and incorporating social support and encouragement into behavior change can increase the likelihood of positive change.

- **Organizations** – Schools, businesses and churches can all play a role in improving the behavior of individuals by changing policies and environments to ones which promote healthy behaviors and environments.

- **Communities** – Communities are like organizations. They can make changes to policies and environments in order to better promote health and wellness. Changes in zoning ordinances, improving parks, adding biking lanes and providing access to low-cost fresh fruit and vegetables can all bring about positive changes.

- **Society** – Society involves individuals, groups, organizations and communities all working together to bring about large scale changes. Some ways societies can bring about change is pushing for statewide nutrition and physical education legislation, developing media campaigns, and partnering with businesses and industries to change workplaces.\(^{18}\)

Kentucky’s VERB program is a successful example of a NAPO-funded childhood obesity prevention initiative. The VERB Summer Scorecard program is an innovative social marketing campaign that makes physical activity accessible to “tweens,” children 9-13 years old. The VERB program enlists the help of local businesses, faith-based organizations and public organizations to give tweens a variety of free or reduced-priced activities over an 8-week period. Activities have included dances, swimming activities, volleyball parties and roller skating. Participating tweens each receive a scorecard that they can get stamped each time they attend an event. Parents
can also initial the scorecard whenever their child completes one hour of physical activity. At the end of the summer, participants can turn in their scorecard for a night of prizes, games and other activities. More than 350 tweens participated in the first year of the program, logging over 8,400 hours of physical activity. The following year, 800 tweens turned in completed scorecards, a 130% increase. A majority of parents (65%) said their tweens were more physically active after participating in the VERB program. Because of its success in Kentucky, VERB programs are now being established in cities in Colorado, Florida, Iowa and Nebraska.19

School-Related Legislation. In order to limit the amount of poorer quality food available to Indiana students in school vending machines, the 2006 Indiana General Assembly enacted SEA 111 on July 1, 2006. The bill requires that vending machines cannot be accessible to students in elementary schools. In schools where students can access vending machines, 50% of food items must qualify as better-choice foods, and 50% of beverage choices must qualify as better-choice beverages. Additionally, snack-type items such as potato chips must be contained in serving-sized packages of no more than 210 calories.20

The State of Indiana also has adopted the National Physical Education Standard's weekly minimum time recommendations for physical education for young people in all grades. However, local schools have the flexibility to determine how much instructional time is actually necessary for students to meet the seven physical education standards. The recommendations are:

- Grades 1, 2, and 3 motor skills development and health education – 105 minutes weekly;
- Grades 4, 5, and 6 physical education - 75 minutes weekly;
- Grades 6, 7, and 8 physical education - 100 minutes weekly; and
- High school graduation requirement - two semesters.21

As demonstrated by the increasing number of overweight and obese youth in Indiana, local schools are not offering an adequate amount of time devoted to physical activity to maintain student fitness.

FACTORS AFFECTING CURRENT CONDITIONS

Environment

Despite the resources available in Central Indiana to help prevent and reduce overweight and obesity, the percentage of overweight and obese Hoosiers continues to increase. One reason which may help explain this rise, particularly in minority, low income and less educated populations is the environment. Individuals living in more impoverished areas may be in neighborhoods that lack streetlights, sidewalks, safe trails and exercise-friendly parks. Safety concerns may affect the ability of residents to engage in outdoor activities. The availability and cost of healthy food choices has also been identified as an important contributor to obesity. One study found four times as many supermarkets in wealthy, white neighborhoods as in poorer, ethnic neighborhoods.22 Low income neighborhoods, however, have a higher number of fast food restaurants when compared to higher income neighborhoods.23 These two factors impact the availability of healthy foods and increase the likelihood of poor eating habits. Moreover, researchers have shown that healthy diets cost significantly more than poor-quality, calorie-laden diets,24,25 and that most low-cost food in the United States is calorie dense.

In Marion County, researchers have begun to explore the relationship where children live and changes in their BMI. By mapping the addresses of children served through the Regenstrief Health Center, researchers have been able to explore the impact of the location of grocery stores, fast food outlets, recreational facilities, and levels of violent crimes in the vicinities of where the children live on changes in BMI as children return to Regenstrief for further services. Preliminary results of their work indicate that as the number of fast food establishments near a child's residence increases, the level of BMI increases. A higher number of supermarkets near a child's home is associated with a decrease in BMI. Having newer recreational facilities near a child's home is also associated with lower BMI levels. The effect of the presence of recreational facilities is significantly affected by the level of crime. With lower levels of crime, the effect of the new recreational facilities has a more positive impact on BMI. In higher crime areas, the effect of the new facilities is less. The authors argue crime likely is serving as a deterrent to the use of the facilities. Even though these results are preliminary, they support the notion that environment plays a strong role in shaping the development of obesity in children.26

Finally, transportation planners can take into account the effects of transportation choices on rates of overweight and obesity. Transportation plans that prioritize
and promote transportation choices other than private automobiles will result in a more physically active populous. For example, residents have the option of walking when sidewalks are safe and connected. Residents who have the option to choose mass transit will increase their amount of activity as they walk from their transit stops to their destinations. Safe and adequate numbers of bicycle lanes will allow residents to choose to bicycle to their destinations.

**Behavioral Factors**

Behavioral factors include day-to-day habits and behaviors such as exercise and inactivity that may increase or decrease the likelihood of weight gain. Experts have found a strong correlation between excess weight and time spent watching television. In addition, computer use, time with gaming devices and time commuting by vehicle have been suggested as behavioral factors that contribute to the obesity epidemic. Culture has been found to affect activity levels with white adolescent males spending an average of 13 hours inactive per week, while their non-white counterparts average 20 hours of inactivity per week. These findings could reflect support for activity/inactivity from family members, friends, and community programs. Other cultural factors identified include the number of televisions or electronic entertainment materials in the home, perceived parental enjoyment of sedentary activities, participation in club-style activities, and dietary habits.

**Psychological Factors**

Overeating is a coping mechanism some people use to deal with emotions such as depression, sadness, anger and boredom. This does not mean that overweight and obese people have more emotional problems than other people; rather, that their feelings influence their eating habits.

**Attitudes**

Cultural attitudes regarding weight may also affect the effectiveness of overweight and obesity prevention programs. For example, within the black culture, women tend to experience less pressure about their weight, tend to be more satisfied with their bodies, and have less negative attitudes about being overweight compared with white women. Because of their more positive attitudes about being overweight, black women may be less motivated to learn about or engage in behaviors that prevent or reduce obesity.

**LIKELY FUTURE DEVELOPMENTS**

Without more aggressive prevention efforts, it is anticipated that the number of overweight and obese children and adults in Central Indiana will continue to rise. Associated with this rise will be an increase in obesity-related illnesses such as cardiovascular disease, stroke and type II diabetes. Health-care expenditures for obesity-related illnesses will also continue to mount.
## COMMUNITY’S CAPACITY TO ADDRESS CURRENT AND FUTURE CONDITIONS / RECOMMENDATIONS

Although programs and resources exist which are working to reduce and prevent overweight and obesity in Central Indiana, it is clear that additional efforts need to be made:

<table>
<thead>
<tr>
<th>Where We Should Be</th>
<th>Priority</th>
<th>How to Get There</th>
<th>Financial Resources Requirements / Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public Policy Advocacy</td>
<td>Community Education</td>
</tr>
<tr>
<td>Schools include healthier food items in lunch programs, summer feeding programs and on school grounds.</td>
<td>Critical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community organizations, churches and other trusted neighborhood partners promote day-to-day lifestyle changes that result in increased physical activity and better eating habits by area residents.</td>
<td>Critical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation and land use planners make choices about the built environment that encourage the use of modes of transportation that result in increased physical activity among local residents.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical education and activity is mandatory for all Indiana schools at levels that meet national standards.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parks and other recreational areas are safe and accessible to local residents.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Where We Should Be</td>
<td>Priority</td>
<td>How to Get There</td>
<td>Financial Resources Requirements / Implications</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Public Policy Advocacy</td>
<td>Community Education</td>
</tr>
<tr>
<td>Curricula for programs addressing overweight and obesity appeal to culturally diverse groups with different views of weight.</td>
<td>Desirable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community organizations, health organizations and urban planners collaborate to increase the supply of fresh and healthy foods in neighborhoods that lack access to healthy, affordable and accessible food stores.</td>
<td>Desirable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Policy Changes Can Affect Overweight and Obesity

Recognizing that students in their school system were becoming increasingly overweight, the School District of Philadelphia developed a policy intervention to combat the problem. The intervention included:

- adjusting the nutrition policy of schools so that no unhealthy foods were available in cafeterias and vending machines, and that all food provided met the Dietary Guidelines for Americans;
- providing staff with training in nutrition education;
- providing 50 hours of nutrition education to students that emphasized how food choices and physical activity are tied to personal behavior, individual health and the environment;
- developing a social marketing campaign to reward students for making healthy food choices and designing a slogan and mascot which would be used to promote healthy eating; and
- incorporating families through home and school association meetings, report card nights and weekly nutrition meetings.

The intervention was implemented in 10 schools during a two-year period. When the students in the 10 participating schools were compared to other students, it was found that the policy changes had resulted in:

- a 50% reduction in the incidence of overweight students;
- a lower prevalence of overweight in the intervention schools; and
- that the intervention was particularly effective for black students. Black students in the intervention were 41% less likely than black students not in the intervention to be overweight at the end of the two years.32

Endnotes

2 Ibid.
5 Ibid.
8 Ibid.
9 Marion County Health Department. Marion County Needs Assessment. Indianapolis, IN: Marion County Health Department. 2008.
12 Ibid.
13 Marion County Health Department. Marion County Needs Assessment.
14 Ibid.
15 Ibid.
18 Ibid.


Health — Sexually Transmitted Infections

INTRODUCTION

Reducing the prevalence of sexually transmitted infections (STIs) is one of the primary goals outlined in the Department of Health and Human Services' (DHHS) Healthy People 2010 prevention initiative. Of particular interest to the DHHS are three commonly occurring STIs: chlamydia, gonorrhea and syphilis. The reduction in the prevalence of HIV and AIDS is also a significant goal.¹

Chlamydia

Chlamydia is one of the most commonly reported STIs in the United States. The rates of chlamydia infection are highest in women between the ages of 15-24 and in men between the ages of 20-24. Persons infected with chlamydia typically have no symptoms; however, if left untreated, up to 40% of women with chlamydia will develop pelvic inflammatory disease, and up to 20% of those may become infertile. Complications from chlamydia are uncommon in men but may include epididymitis and urethritis, which can cause pain, fever, and in rare cases, sterility.² By 2010, the DHHS would like no more than 3% of women between 15-24 screening positive for chlamydia at family planning or STI clinics, and no more than 3% of men between 15-24 years of age screening positive in the same settings.³

Gonorrhea

Gonorrhea is an STI caused by a bacterium that can grow and multiply easily in the warm, moist areas of the reproductive tract. Gonorrhea infections are most prevalent in sexually active women between the ages of 15-24 and sexually active men between the ages of 20-24. While relatively easy to cure with antibiotics, if left untreated gonorrhea can cause pelvic inflammatory disease in women and epididymitis in men. Gonorrhea can also spread to the blood or joints and become life threatening. Persons infected with gonorrhea are also more susceptible to contracting HIV, the virus that causes AIDS. HIV infected people with gonorrhea can transmit HIV more easily to someone else than if they did not have gonorrhea. For gonorrhea, the DHHS has set a goal of reducing new gonorrhea cases to 19 per 100,000 people.⁴

Syphilis

Syphilis is an STI also caused by a bacterium. Individuals infected with syphilis may develop sores that heal over time. Many individuals will show no symptoms of the infection. Syphilis rates are highest in women 20-24 years of age and men 35 to 39 years of age. If left untreated, syphilis can cause damage to internal organs including the eyes, brain, heart, blood vessels, liver, bones and joints. Pregnant women can
also pass the disease to their unborn child, resulting in still births or other serious complications for the developing fetus. The Healthy People 2010 initiative states a goal of reducing syphilis infections to 0.2 cases per 100,000 people.5

HIV/AIDS

HIV stands for human immunodeficiency virus, the virus that causes AIDS. HIV is different from most other viruses because it attacks the immune system. AIDS stands for acquired immunodeficiency syndrome, the final stage of HIV infection. It can take years for a person infected with HIV, even without treatment, to reach this stage. Having AIDS means that the virus has weakened the immune system to the point at which the body has a difficult time fighting infections. At the end of 2003, an estimated 1,039,000 to 1,185,000 persons in the United States were living with HIV/AIDS. In 2006, 35,314 new cases of HIV/AIDS in adults, adolescents and children were diagnosed in the 33 states that use long-term, confidential name-based HIV reporting. The goal set by the Healthy People 2010 initiative for new AIDS cases in adults and adolescents is one new case per every 100,000 persons.6

CURRENT CONDITIONS

Chlamydia rates both nationally and locally have been rising steadily over the last several years (see Figure X). The national rate of reported chlamydia in 2006 was 347.8 cases per 100,000 people. Indiana's rate of chlamydia infections for 2006 was lower than the nation's at 316.0 cases per 100,000.7 Central Indiana's chlamydia infection rate of 474.2 cases per 100,000 people is significantly higher than both the state and national rate. Central Indiana ranks 7th worse of all metropolitan areas in the nation for chlamydia infections.8

Women in the Central Indiana area had far higher rates of chlamydia infection (670.3 per 100,000) than men (269.0 per 100,000) in 2006. Within Central Indiana, Marion County had the highest infection rate of 795.4 chlamydia cases per 100,000 residents.9 Females in Marion County between the ages of 15-24 experienced chlamydia infections at a rate of 6,383.6 cases per 100,000, while Marion County males in the same age group had 2,148.9 cases per 100,000. Because many cases of chlamydia have no symptoms and go undetected, the actual 2006 incidence may be two to four times higher than the reported, diagnosed incidence.10 Based on available data, it appears the group most at risk for chlamydia is sexually active women between the ages of 15-24 residing in Marion County. However, given the general trend of rising rates across all UWCI counties (see Table 1), more efforts need to be devoted to chlamydia prevention.

Figure 1: Rates of Chlamydia Infection in the Indianapolis Metropolitan Area

Table 1. Rates* of Chlamydia Infections in United Way of Central Indiana Service (UWCI) Area – All Ages 6

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>79.4</td>
<td>56.7</td>
<td>81.7</td>
<td>119.3</td>
<td>126.1</td>
</tr>
<tr>
<td>Hamilton</td>
<td>52.7</td>
<td>69.8</td>
<td>79.3</td>
<td>80.3</td>
<td>112.0</td>
</tr>
<tr>
<td>Hancock</td>
<td>87.5</td>
<td>94.5</td>
<td>140.9</td>
<td>158.8</td>
<td>128.3</td>
</tr>
<tr>
<td>Hendricks</td>
<td>75.8</td>
<td>73.7</td>
<td>128.1</td>
<td>129.4</td>
<td>122.5</td>
</tr>
<tr>
<td>Marion</td>
<td>733.8</td>
<td>705.7</td>
<td>850.3</td>
<td>827.5</td>
<td>811.3</td>
</tr>
<tr>
<td>Morgan</td>
<td>121.6</td>
<td>137.9</td>
<td>170.5</td>
<td>160.0</td>
<td>172.5</td>
</tr>
</tbody>
</table>

*Rates per 100,000 population

The rate of gonorrhea infections within the U.S., Indiana and the Central Indiana area has been steadily increasing over the past five years. In 2006, the U.S. chlamydia rate was 120.9 per 100,000 people. Indiana’s gonorrhea rate was 139.2 per 100,000 Hoosiers while Central Indiana had an infection rate of 268.8 per
100,000 residents. Males and females in Central Indiana experienced similar levels of gonorrhea infection during 2006. Within Central Indiana, Marion County had significantly more gonorrhea infections with 482.9 cases per 100,000 persons. As with chlamydia, Marion County females between 15 and 24 years of age had the highest rates of gonorrhea (2,620.5 per 100,000) compared to males of the same age (1,656.1 per 100,000). The prevalence rate of gonorrhea in the Central Indiana area is well above the goal set by the Healthy People 2010 initiative. Gonorrhea appears to be increasing in all UWCI counties to some degree (see Table 2) and may require more intensive prevention efforts.

Figure 2: Rates of Gonorrhea Infection in the Indianapolis Metropolitan Area

The U.S. rate of syphilis infections has been rising gradually since 2002. A similar trend of increasing syphilis infections is also seen in both Indiana and the Central Indiana area. The national syphilis rate for 2006 was 3.3 cases per 100,000 people. The 2006 syphilis prevalence rates for Indiana and Central Indiana are 1.5 and 2.9 cases per 100,000 residents respectively. Syphilis infections in Central Indiana are concentrated almost exclusively within Marion County. Unlike with chlamydia and gonorrhea, men are more significantly affected by syphilis. Central Indiana men had an infection rate of 5.7 cases per 100,000 while women had a rate of 0.1 cases per 100,000. Although syphilis rates within Indiana and the local community are below national levels, they are still above the 0.2 cases per 100,000 desired by DHHS. While rates for women in the Central Indiana have declined in the last five years, cases of syphilis appear to be increasing for Central Indiana men.

Figure 3: Rates of Syphilis Infections for the Indianapolis Metropolitan Area

Table 2. Rates of Gonorrhea Infections in UWCI Service Area

<table>
<thead>
<tr>
<th>County</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>14.8</td>
<td>11.3</td>
<td>9.7</td>
<td>35.8</td>
<td>22.4</td>
</tr>
<tr>
<td>Hamilton</td>
<td>16.8</td>
<td>17.1</td>
<td>18.6</td>
<td>21.1</td>
<td>29.1</td>
</tr>
<tr>
<td>Hancock</td>
<td>13.6</td>
<td>24.8</td>
<td>25.6</td>
<td>39.7</td>
<td>45.6</td>
</tr>
<tr>
<td>Hendricks</td>
<td>14.1</td>
<td>15.3</td>
<td>33.2</td>
<td>31.7</td>
<td>32.9</td>
</tr>
<tr>
<td>Marion</td>
<td>356.1</td>
<td>382.3</td>
<td>462.6</td>
<td>510.3</td>
<td>488.4</td>
</tr>
<tr>
<td>Morgan</td>
<td>15.7</td>
<td>18.7</td>
<td>17.3</td>
<td>50.9</td>
<td>43.8</td>
</tr>
</tbody>
</table>
STIs are a serious problem for teenaged-girls:

- The CDC reports one in four young women between 14 and 19, or 3.2 million girls, has a STI.
- The most commonly reported STI was human papillomavirus (HPV) however, chlamydia, herpes and trichomoniasis were also quite prevalent.
- African-American teenage girls were the most severely affected, with 48% believed to be infected compared to 20% of young white women.22

The U.S. prevalence rate of HIV appears to be gradually increasing. From 2002 through 2006, Indiana’s HIV prevalence rates have been relatively stable and lower than national rates. HIV prevalence rates for Central Indiana are not currently available. The U.S. prevalence rate for AIDS has been rising steadily since 2002. Indiana’s AIDS prevalence rate is well below that of the nation and appears to stable. Data on the rate of new cases of HIV are not currently available on a national, state or local level. For the years 2000 through 2005, the rate of new AIDS cases in the U.S. has been steady at between 14.0 to 15.0 cases per 100,000 individuals. Indiana’s overall incidence rate for the same period is far less, ranging from 6.2 to 8.0 cases per 100,000 persons. Marion County, however, stands out when compared to the nation and the state as having a significantly higher incidence rate of new AIDS cases, with the highest incidence of 29.2 cases per 100,000 residents reported in 2002. The AIDS incidence rates in Indiana and particularly in Marion County indicate a need for continued prevention efforts in this area.23
Response Systems

There are a number of resources available that focus on prevention and treatment of STIs and HIV/AIDS. The Indiana State Department of Health has a comprehensive prevention and treatment framework that provides education, testing, and treatment for STIs and HIV/AIDS. One component of this framework is Project RESPECT. Project RESPECT is Indiana’s statewide teen pregnancy prevention initiative. Project RESPECT provides education on the risks of sexual activity to Indiana students and promotes abstinence as the most effective way to prevent unwanted pregnancy and STIs. Other local agencies involved in educating youth and others about sexual behavior, STIs, and HIV/AIDS are Planned Parenthood of Indiana, Girls, Inc., the Social Health Association, the Boys and Girls Club of Indianapolis, The Salvation Army, the Mary Rigg Neighborhood Center, the Bridging the Gap Project, and the Indiana Minority Health Coalition.

The Marion County Health Department has formed collaborations with a number of community groups for the purposes of HIV/AIDS and STI prevention such as:

- Step Up that provides outreach to individuals at gay bars and bath houses;
- Brothers United that works to prevent the spread of HIV/AIDS and STIs in the African-American Gay/Lesbian/Bisexual/Transgender (GLBT) community;
- The Damien Center that provides HIV/AIDS and STI education and also coordinates services for individuals living with HIV/AIDS;
- The Indiana Youth Group that works to prevent STIs and HIV/AIDS with lesbian, gay, bisexual and transgendered youth; and
- The Indianapolis Urban League that targets HIV/AIDS prevention services to the African-American community.

Combating HIV/AIDS - The Indiana AIDS Fund

The Indiana AIDS Fund (IAF), established in 1994, is a private philanthropic fundraising and grant-making organization dedicated to supporting HIV prevention and services programs throughout Indiana. It began making grants in 1996, and has granted more than $2 million to more than 60 organizations across Indiana to date. IAF funds innovative and diverse programming including:

- Prevention;
- Direct care and services;
- Advocacy;
- Capacity building; and
- Food and nutrition.

Annually, IAF funds client emergency financial assistance and prevention activities. Populations that IAF targets include:

- Women at risk;
- Women at risk in communities of color;
- Faith-based initiatives in communities of color;
- Substance-using populations;
- Youth; and
- Men who have sex with men.

The IAF also provides training, technical assistance and referral information on HIV and AIDS-related topics.
Factors Affecting Current Conditions

Currently, the state of Indiana does mandate that public schools provide AIDS instruction, STI and sexuality education to students. However, Indiana does not have a mandated sex education curriculum. School corporations have the flexibility to determine what instruction they will provide based on their community’s standards. The Indiana human sexuality law states “that an accredited school shall require a teacher to teach abstinence from sexual activity outside of marriage as the expected standard for all school age children, and that abstinence from sexual activity is the only certain way to avoid pregnancy, sexually transmitted diseases, and other associated problems.” Based on a community’s standards, a school corporation can choose whether or not to discuss condom use and birth control.

Recent research conducted in Indiana on sex education in the classroom indicated that the most commonly covered topics were HIV/AIDS, relationship issues, STIs, body image, female puberty, anatomy, pregnancy, male puberty, and sexual decision making. Only 20% of educators reported discussing contraception, and only 6.9% said they discussed condom use. When students asked questions about sexual activity, their most common concerns were pregnancy and contraception, sexual behavior, relationships, gender and sexual identity. The authors concluded that the typical sex education curriculum presented by Indiana health educators does not match the sexuality-related concerns of most young people.27

Condom use during sexual activity also affects the spread of STIs. As mentioned in Chapter 4, the number of school-aged Hoosiers who reported using condoms during their last sexual encounter has increased over time.28

Another factor that can affect the current conditions of STIs in Central Indiana is a minor’s ability to consent to testing and/or treatment for STIs and HIV/AIDS. Currently, minors have the ability to consent to testing and treatment for STIs. Physicians are not required to report testing or treatment services for STIs to a minor’s parents. Minors cannot consent to testing or treatment for HIV.29

Likely Future Developments

The overtime trends in the rates of gonorrhea, chlamydia, syphilis and AIDS in the Central Indiana area moving in an upward direction. If these trends continue, the Central Indiana area could expect far higher rates of health problems and expenditures related to these STIs in the coming years. Women in Central Indiana appear to be particularly at risk for gonorrhea and chlamydia, while syphilis may be posing a more significant threat for Central Indiana men.

Human Papillomavirus (HPV)

Prevalence. HPV is the most commonly transmitted STI in the U.S. today. Approximately 20 million Americans 15-49 years of age, about 15% of the population, are infected with HPV. Over half of sexually active women and men become infected with HPV at some point in their lives. Each year 6.2 million people in the U.S. become infected with HPV.

Consequences of HPV. There are at least 40 types of HPV, most of which are harmless. Some types of HPV can cause genital warts. Other types of HPV are particularly dangerous and can lead to the development of cancer, particularly cervical cancer in women.

Prevention of HPV. On June 28, 2006, the FDA approved the first vaccine for HPV, Gardasil. Gardasil protects women against the forms of HPV that cause 70% of cervical cancers and 90% of genital warts. Gardasil can be administered to girls as young as 9 and to women up to 26 years of age who have not yet received or completed the vaccine series. Gardasil is only approved for girls and women. Regular use of condoms during sexual activity can help reduce the spread of HPV.30
The Stamp Out Syphilis Coalition is an example of an innovative and successful approach to reducing the spread of STIs.

- In 1999, Marion County received national notoriety for being the “syphilis capital of the nation” with 407 cases of primary and secondary syphilis.\textsuperscript{11}
- The Marion County Health Department collaborated with a cross section of consumers, advocates, volunteers and professionals from all walks of life to create the SOS Coalition.
- They had strong collaboration with a wide range of community organizations that spanned all sectors and included representatives from media, faith-based organizations, Hispanic groups, men who have sex with men, youth, and transgendered individuals.
- The SOS Coalition took a multifaceted approach to prevention by providing media coverage, education, community outreach, and peer counseling among other activities.
- By 2006, Marion County ranked 31\textsuperscript{st} in the nation for cases of syphilis with 47 cases.\textsuperscript{12}
Community's Capacity to Address Current and Future Conditions/Recommendations

Many resources currently exist in the Central Indiana for both STI and HIV/AIDS prevention and treatment. However, given the upward trends in the prevalence of many common STIs, the approaches these programs are taking may need to change. Some possible suggestions include:

<table>
<thead>
<tr>
<th>Where We Should Be</th>
<th>Priority</th>
<th>How to Get There</th>
<th>Financial Resources Requirements / Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Public Policy Advocacy</td>
<td>Community Education</td>
</tr>
<tr>
<td>Local school systems provide instruction to students about the full range of HIV and STI prevention methods they can take to protect their health.</td>
<td>Critical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To reach at-risk populations, nontraditional settings such as churches and other places of worship offer STI and HIV/AIDS prevention programs based on successful models such as Stamp Out Syphilis.</td>
<td>Critical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevention programs that target young people are supplemented with classes which help parents overcome the stigma of talking with their children about sex.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STI screenings targeted to youth in middle school through young adulthood reduce the incidence and transmission of STI’s in Central Indiana.</td>
<td>Important</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
United Way of Central Indiana publishes the 2008 Community Assessment and provides it to the community as a credible source of information and insight for the greater Central Indiana region.

Endnotes


4. Ibid.

5. Ibid.

6. Ibid.


9. Marion County Health Department. *Marion County Needs Assessment.* Indianapolis, IN: Marion County Health Department; 2008.

10. Ibid.

11. Ibid.

12. Ibid.


16. Ibid.


23. Marion County Health Department. *Marion County Needs Assessment.*


Health — Substance Abuse and Addictions

INTRODUCTION

In its publication Healthy People 2010, the U.S. Department of Health and Human Services lists substance abuse as one of the 10 leading health indicators because it is a major public health concern in the nation. Substance abuse refers to the overindulgence of alcohol and other drugs, including marijuana, cocaine/crack, methamphetamines, heroin, hallucinogens, inhalants, etc. The abuse of these substances can cause many serious problems. Nationally, the annual estimated economic costs are $167 billion for alcohol abuse and $110 billion for drug abuse. Consequences of substance abuse are manifold and include an increase in morbidity, mortality, crime and other negative social outcomes.

Addiction, the physical and psychological dependence on a substance, is a chronic disease. Like other chronic diseases, addiction has a strong genetic component, can be identified with reliable diagnostic methods, and can be managed with treatment and medication. It is a disease of the brain similar to other chronic, relapsing conditions such as asthma, diabetes and high blood pressure that can lead to life threatening complications.

Substance abuse can lead to addiction. Therefore, the goal specified in the Healthy People 2010 publication is to reduce substance abuse to protect the health, safety and quality of life for all, especially children.

The treatment of addiction through medical and treatment interventions will also be discussed.

Gambling is a behavior that also has the potential to lead to addiction, even though it doesn’t involve the consumption of a substance. Almost 90% of Hoosiers ages 21 to 59 have engaged in some sort of gaming or betting for money at some point in their life, with men more likely than women to gamble. Problem and compulsive (pathological) gambling are terms frequently used to describe individuals who experience negative outcomes related to their heavy gambling. The major difference between the two is that problem gamblers are not fully addicted and can stop, while compulsive or pathological gamblers are not able to resist the urge to gamble. People with gambling disorders frequently have other mental health problems as well, including substance use disorders, bipolar disorder, depression and attention deficit disorder.

CURRENT CONDITIONS

Alcohol is the most frequently used drug in Indiana and the nation. About half of all Hoosiers 12 years and older currently drink, and more than one in five have engaged in binge drinking consuming five or more drinks on the same occasion at least once in the past 30 days. Additionally, more than seven percent of Indiana residents reported past-month use of illicit substances, including marijuana/hashish, cocaine/
crack, heroin, hallucinogens, inhalants, or non-medical use of prescription medication. Of all illicit drugs, marijuana is the most frequently used substance.6

Adult Alcohol and Other Drug Abuse

In Indiana, young adults ages 18 to 25 consistently report the highest rates of drug use:7

- Past-month alcohol use: 61.3%
- Past-month binge drinking: 42.0%
- Past-month illicit drug use: 18.5%
- Past-month marijuana use: 14.4%
- Past-month non-medical pain reliever use: 14.2%
- Past-year cocaine use: 7.5%

In 2003, Indiana University conducted the Indiana Adult Household Survey to provide substance abuse prevalence rates and identify treatment needs at the state and county level. Rates for past-month heavy alcohol use, illicit drug use and marijuana use in Central Indiana are presented in Table 1.

<table>
<thead>
<tr>
<th>County</th>
<th>Heavy Use of Alcohol in Past Month</th>
<th>Illicit Drug Use in Past Month</th>
<th>Marijuana Use in Past Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>3.1%</td>
<td>3.9%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Hamilton</td>
<td>4.8%</td>
<td>3.4%</td>
<td>1.1%</td>
</tr>
<tr>
<td>Hancock</td>
<td>5.0%</td>
<td>3.5%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Hendricks</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Johnson</td>
<td>5.1%</td>
<td>3.6%</td>
<td>1.2%</td>
</tr>
<tr>
<td>Marion</td>
<td>5.5%</td>
<td>5.6%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Morgan</td>
<td>3.2%</td>
<td>4.1%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Shelby</td>
<td>5.1%</td>
<td>3.6%</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

Note: Community-level data for Hendricks County were not available.

Youth Alcohol and Other Drug Abuse

Generally, the earlier someone starts to use alcohol or other drugs, the more likely they are to face negative consequences from abuse and addiction as an adult. Studies show that 90% of all individuals with addictions started using before the age of 18, and half started using before the age of 15.7 Adolescents ages 12 to 17 in Indiana report the following prevalence rates:10

- Past-month alcohol use: 17.1%
- Past-month binge drinking: 10.8%
- Past-month illicit drug use: 10.0%
- Past-year non-medical pain reliever use: 8.5%
- Past-month marijuana use: 6.5%
- Past-year cocaine use: 1.5%

The Alcohol Cost Calculator for Kids estimates that of the more than 812,000 young people in Indiana, 94,570 have an alcohol problem, yet 79,745 (84.5%) of them do not get treatment. Of youth with alcohol problems, almost 28,000 of them are estimated to have serious problems with other drugs.11

The Indiana Prevention Resource Center annually conducts a self-reported Alcohol, Tobacco, and Other Drug Use by Indiana Children and Adolescents Survey. That survey, as well as research conducted by Drug Free Marion County’s Youth Advisory Group, point to sources of alcohol for local youth, with the most prevalent sources including friends the same age, or from relatives, friends or acquaintances over the age of 21 who purchase or supply the alcohol, and from the youths’ own homes. The research noted that youth also receive alcohol directly from their parents, and have been able to purchase alcohol themselves in stores and restaurants.12

The Youth Advisory Group’s research also reported that the two most popular times to use alcohol are on weekends or at parties, followed by after-school time. Finally, teens in an alcohol recovery group reported that their alcohol preference to be hard liquor (47%), followed by beer and ale (27%) and Alcopops (11%; flavored alcoholic beverages).13
Alcohol and Drug Use on College Campuses – IUPUI

In the spring of 2006, 472 Indiana University-Purdue University Indianapolis (IUPUI) students participated in the Core Alcohol and Drug Survey. Key findings include:

- 63.6% of underage IUPUI students consumed alcohol in the previous 30 days.
- 36.8% of IUPUI students reported binge drinking in the previous two weeks.
- 26.0% of IUPUI respondents reported some form of public misconduct at least once in the past year as a result of drinking or drug use.
- 22.8% of IUPUI respondents reported experiencing some kind of serious personal problem (e.g., suicidality, injury or assault) at least once in the past year as a result of drinking or drug use.
- 62.6% of IUPUI students said the campus has alcohol and drug policies; 36.8% said they did not know.
- 18.7% of IUPUI students said the campus has an alcohol or drug prevention program; 78.5% said they did not know.
- 52.6% of IUPUI students said the campus is concerned about the prevention of drug and alcohol use; 38.1% said they did not know.
- 92.3% of IUPUI students believed the average student on campus uses alcohol once a week or more.

Compared to students from other institutions, IUPUI respondents had higher 30-day, annual and lifetime prevalence rates of alcohol use. Also, more IUPUI students reported unsuccessful attempts to stop using, serious suicidal thoughts and attempted suicide.14

Other local college campuses also report alcohol and drug-related incidents. As reported in Drug Free Marion County’s Local Epidemiological Report on Underage and Binge Drinking, 2008, Butler University had the highest rate of on-campus alcohol incidents per student population followed by Marian College. Differences in incident rates among college campuses can be accounted for in part by the extent of and culture of residential life on campus. IUPUI has the highest percentage of students that commute to campus, and while it may report fewer on-campus alcohol related incidents, drug and alcohol issues may be reflected in Marion County criminal data or otherwise go underreported.15

Morbidity

Almost nine percent of Indiana adults reported past-year alcohol and/or drug abuse in 2003; the rate for Marion County at roughly 12% is significantly higher.16 One of the dangers of substance abuse is that it potentially can progress into dependence (addiction). Table 3 shows the rates for alcohol and drug abuse and dependence in Central Indiana.

Table 2: Percentage of Indiana Adults, 18 Years and Older, Reporting Alcohol and Drug Abuse and Dependence in the Past Year17

<table>
<thead>
<tr>
<th></th>
<th>Past-year Alcohol Abuse</th>
<th>Past-year Alcohol Dependence</th>
<th>Past-year Drug Abuse</th>
<th>Past-year Drug Dependence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>6.5%</td>
<td>1.6%</td>
<td>1.2%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Hamilton</td>
<td>6.2%</td>
<td>1.4%</td>
<td>0.6%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Hancock</td>
<td>6.5%</td>
<td>1.5%</td>
<td>0.6%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Hendricks</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Johnson</td>
<td>6.5%</td>
<td>1.5%</td>
<td>0.6%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Marion</td>
<td>10.9%</td>
<td>3.1%</td>
<td>1.5%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Morgan</td>
<td>6.8%</td>
<td>1.7%</td>
<td>1.2%</td>
<td>0.8%</td>
</tr>
<tr>
<td>Shelby</td>
<td>6.7%</td>
<td>1.5%</td>
<td>0.6%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Indiana</td>
<td>8.0%</td>
<td>1.8%</td>
<td>0.9%</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

Note: Community-level data for Hendricks County were not available.

The Indiana Division of Mental Health and Addiction estimates the prevalence of chronic addiction to be 10.7% for 12- to 17-year olds, 22.6% for 18- to 25-year olds, and 7.5% for persons ages 26 and older. According to 2007 data, a total of 455,864 Hoosiers 12 years and older are estimated to suffer from chronic addiction, of which 110,618 are from Central Indiana.18

From 2004 through 2006, Indiana hospitals recorded almost 7,500 hospital discharges with an alcohol- or drug-related primary diagnosis. Of these hospital discharges, more than 1,500 occurred in Central Indiana, primarily in Marion County (1,186).19

Individuals who abuse alcohol and other drugs are more likely to contract sexually transmitted diseases (STDs). Injecting drug users (IDUs) are at a particularly high-
risk due to needle-sharing practices. Currently, a total of 9,168 persons are living in Indiana with HIV; and 805 contracted the disease by injecting drugs.\textsuperscript{20} (For more information on HIV/AIDS, refer to the chapter section on STDs.)

Prenatal exposure to alcohol can cause a range of disorders known as fetal alcohol spectrum disorders, the most severe form of which is fetal alcohol syndrome (FAS). FAS is one of the leading preventable causes of mental retardation and birth defects.\textsuperscript{21} According to the National Institute on Alcohol Abuse and Alcoholism, the prevalence of FAS in the general population lies between 0.5 and 2.0 per 1,000 live births.\textsuperscript{22} Therefore, we can estimate that in 2005, between 44 and 174 babies were born with FAS in Indiana; the numbers range from 12 to 49 for Central Indiana.

Other health conditions may be caused or exacerbated by substance use disorder. Common co-morbidities can include brain damage, liver disease, gastrointestinal problems, pancreatitis, cardiovascular disorders, cancer and nutritional deficiencies.\textsuperscript{23}

### Mortality

Overall mortality rates are higher among substance abusers than among non-users. Many of the deaths are associated with drug overdoses, but some are from self-inflicted injuries, accidents, violence or medical causes. Data from 1999 through 2005 show the following for Central Indiana:\textsuperscript{24}

- Almost 3,000 individuals died from unintentional injuries and accidents. This represents a mortality rate of 28.0 per 100,000 population (the rate for Indiana is 36.8).
- About 1,200 individuals completed suicide. This represents a mortality rate of 11.3 per 100,000 population (the rate for Indiana is 11.5). It is estimated that 23% of all suicide deaths are attributable to alcohol.\textsuperscript{25}
- Roughly 870 individuals became a victim of assault/homicide. This represents a mortality rate of 8.1 per 100,000 population (the rate for Indiana is 6.1). It is estimated that 47% of homicides are alcohol related.\textsuperscript{26}
- Approximately 800 individuals died from alcoholic liver disease and cirrhosis. This represents a mortality rate of 7.8 per 100,000 population (the rate for Indiana is 7.8).

### Fatal Drug Overdoses in Indiana – a Growing Concern

An issue that has received recent attention is the increase in fatal drug overdoses. The number of drug-induced deaths increased in Indiana from 245 in 1999 to 665 in 2005 representing a 170% increase. Similarly, the number of drug overdoses that resulted in death in Central Indiana rose from 67 in 1999 to 158 in 2005, a 140% increase.

Heroin, cocaine, prescription drugs and alcohol are the most commonly used substances in accidental overdoses. Opiates are most commonly detected during post-mortem examinations, but they are seldom the only substance found. Alcohol and benzodiazepines in conjunction with opioids play a significant role in overdose fatalities. According to a study by Darke and Ross, two-thirds of drug-induced deaths were associated with heroin and another drug.\textsuperscript{27} The American Medical Association reported in 1999 that prescription drugs were involved in 70% of all drug-related deaths in the United States. Alcohol also plays a major role—in at least half of opiate overdoses, alcohol had been used just prior to death.\textsuperscript{28}

### Legal and Other Consequences

In its report The Economic Costs of Alcohol and Drug Abuse in the United States, the National Institute on Drug Abuse identified a variety of consequences and costs born by society and abusers and their families:\textsuperscript{29}

- **Societal Costs** - drug and alcohol related-crimes and trauma such as motor vehicle crashes; government services such as criminal justice and highway safety; lost tax revenue; and social insurance mechanisms including health care, services for families and children at risk of abuse and neglect, life insurance, tax payments, pensions, and social welfare benefits.
- **Individual Costs** - lost legitimate earnings and household productivity as the result of incarceration, impaired functioning in the labor market, and pursuit of lower paying crime careers.
In Indiana, the number of alcohol-related motor vehicle crashes decreased from 13,911 in 2003 to 11,718 in 2006. However, the decline was not reflected in Central Indiana, where numbers rose from 3,132 to 3,523 in the same period. In 2006, 267 fatalities occurred in alcohol-related motor vehicle crashes statewide, and 38 incidents took place in Central Indiana.

It is evident that drug violations (possession and sale of illicit substances), driving while intoxicated (DUI), public intoxication and liquor law violations are consequences of substance abuse. However, property and violent crimes, as well as prostitution, are also considered indicators of alcohol and drug use (see Table 4).

The Indiana Department of Education collects information on students who were suspended or expelled. The number of students suspended and expelled because of alcohol, drugs or weapons increased from 1,251 in 1999 to almost 1,557 in 2005 in Central Indiana.

Table 3: Number of Arrests for Various Offenses Associated with Substance Abuse, Central Indiana from 1999 through 2005 (Uniform Crime Reports)

<table>
<thead>
<tr>
<th>Offense</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug Violations</td>
<td>7,412</td>
<td>6,838</td>
<td>7,107</td>
<td>7,167</td>
<td>6,985</td>
<td>7,820</td>
<td>8,384</td>
</tr>
<tr>
<td>DUI</td>
<td>6,261</td>
<td>5,466</td>
<td>6,171</td>
<td>7,101</td>
<td>7,416</td>
<td>7,350</td>
<td>7,537</td>
</tr>
<tr>
<td>Public Intoxication</td>
<td>8,701</td>
<td>6,840</td>
<td>6,582</td>
<td>6,349</td>
<td>7,416</td>
<td>5,911</td>
<td>6,041</td>
</tr>
<tr>
<td>Liquor Law Violations</td>
<td>1,898</td>
<td>2,223</td>
<td>2,207</td>
<td>2,088</td>
<td>2,150</td>
<td>2,505</td>
<td>2,539</td>
</tr>
<tr>
<td>Violent Crime</td>
<td>5,792</td>
<td>5,797</td>
<td>6,838</td>
<td>6,146</td>
<td>5,716</td>
<td>6,018</td>
<td>6,388</td>
</tr>
<tr>
<td>Property Crime</td>
<td>9,387</td>
<td>7,374</td>
<td>6,750</td>
<td>6,607</td>
<td>6,198</td>
<td>6,907</td>
<td>7,672</td>
</tr>
<tr>
<td>Prostitution</td>
<td>1,029</td>
<td>877</td>
<td>569</td>
<td>880</td>
<td>1,198</td>
<td>1,208</td>
<td>1,538</td>
</tr>
</tbody>
</table>

Note: The Uniform Crime Reporting system is a national database maintained by the FBI. Since states are not required to submit crime information, levels of reporting vary. Due to these variations, the FBI uses statistical algorithms to estimate the number of arrests for counties with less than 100% submission. Therefore, these numbers should be interpreted with caution.

Figure 1: Percentage of Indiana Adult Residents Engaging in Some Type of Gambling (2005)
Youth Gambling

More than half of the young people ages 12 to 20 in Indiana have engaged in some type of gaming or betting at some point in their life (see Table 2). Young men are much more likely to partake in gambling than young women. The most common types of gaming and betting in this age group are playing cards for money, games of personal skill (like shooting pool or bowling), pull-tabs or scratch-off tickets, and betting on college or professional sports. In SFY 2007, DMHA reported it served 29,000 adults with chronic addiction and 287 adults with gambling problems. Central Indiana adults served in 2007 follows:

Table 5: Indiana Number of Adults Served With Chronic Addiction in SFY 2007

<table>
<thead>
<tr>
<th>County</th>
<th>Chronically Addicted Adults</th>
<th>Chronically Addicted Women with Children or Pregnant</th>
<th>Total Chronic Addiction</th>
<th>Gambling Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>149</td>
<td>18</td>
<td>167</td>
<td>0</td>
</tr>
<tr>
<td>Hamilton</td>
<td>579</td>
<td>80</td>
<td>659</td>
<td>5</td>
</tr>
<tr>
<td>Hancock</td>
<td>187</td>
<td>29</td>
<td>216</td>
<td>0</td>
</tr>
<tr>
<td>Hendricks</td>
<td>285</td>
<td>41</td>
<td>326</td>
<td>0</td>
</tr>
<tr>
<td>Johnson</td>
<td>241</td>
<td>66</td>
<td>307</td>
<td>0</td>
</tr>
<tr>
<td>Marion</td>
<td>3,479</td>
<td>726</td>
<td>4,205</td>
<td>127</td>
</tr>
<tr>
<td>Morgan</td>
<td>428</td>
<td>43</td>
<td>471</td>
<td>1</td>
</tr>
<tr>
<td>Shelby</td>
<td>128</td>
<td>18</td>
<td>146</td>
<td>0</td>
</tr>
<tr>
<td>Central Indiana</td>
<td>5,476</td>
<td>1,021</td>
<td>6,497</td>
<td>133</td>
</tr>
<tr>
<td>Indiana</td>
<td>25,858</td>
<td>3,144</td>
<td>29,002</td>
<td>287</td>
</tr>
</tbody>
</table>

Gambling Consequences

The consequences of problem gambling potentially include alcohol and drug problems, psychiatric conditions (such as depression, anxiety and suicide), financial problems, crime/legal consequences, and problems with family and friends. According to the FBI’s Uniform Crime Reports, the number of arrests for gambling in Central Indiana decreased considerably from 302 in 1999 to 14 in 2005.

Other Resources

Governor’s Commission for a Drug-Free Indiana and Drug-Free Communities

The goal of the Governor’s Commission is to reduce the incidence and prevalence of substance abuse, addictions and other behavioral health problems among adults and children of Indiana by increasing the capacities of local communities to develop comprehensive solutions to local substance abuse and addiction issues. For this purpose, each Indiana county established Local Coordinating Councils (LCCs) to plan and coordinate prevention and intervention efforts within the community. Additionally, the Drug Free Communities Act of 1997 promotes the creation of and support for community anti-drug coalitions. A key aspect of the law is to encourage citizen participation and greater collaboration among all sectors and organizations of a community for the purpose of reducing substance abuse.
The LCCs in Central Indiana are:

- Boone County Local Coordinating Council
- Hamilton County Council on Alcohol and Other Drugs
- Neighbors Against Substance Abuse, Hancock County
- Substance Abuse Task Force, Hendricks County
- Johnson County Citizens Against Substance Abuse
- Drug Free Marion County
- Prime Time of Morgan County
- Drug-Free Coalition, Shelby County

Substance Abuse and Mental Health Services Administration’s (SAMHSA) Treatment Facility Locator

- SAMHSA provides an online resource for locating alcohol and drug abuse treatment programs, by state, county, city or zip code. The database supplies names and contact information of public and private facilities that are licensed or certified. A total of 74 treatment facilities/providers are available in Central Indiana: two in Boone County, seven in Hamilton County, one in Hancock County, six in Hendricks County, eight in Johnson County, 45 in Marion County, three in Morgan County, and two in Shelby County. However, providers who specifically address gambling addictions seem to be more rare (two in Marion County and one in Hendricks County).

Connect2Help

- Connect2Help is Central Indiana’s 2-1-1 regional information and referral call center. Its database includes information on substance abuse and gambling treatment and prevention services, and trained information specialists provide this information to callers.

National Registry of Evidence-based Programs and Practices (NREPP)

- The Substance Abuse and Mental Health Services Administration (SAMHSA) provides an online searchable database of evidence-based interventions for the prevention and treatment of mental and substance use disorders. SAMHSA has developed this resource to help people, agencies, and organizations implement programs and practices in their communities. Evidence-based programs or practices refer to prevention or treatment approaches that are validated by some form of documented scientific evidence. What counts as “evidence” varies. Evidence often is defined as findings established through scientific research, such as controlled clinical studies, but other methods of establishing evidence are considered valid as well. Evidence-based practice stands in contrast to approaches that are based on tradition, convention, belief, or anecdotal evidence. The NREPP Web site can be found at http://www.nrepp.samhsa.gov/ 

Unmet Service Needs

Unfortunately, not everybody in need of treatment for abuse/addiction issues receives services. It is estimated that 7.5% of Hoosiers ages 12 and older are in need of but do not receive treatment for alcohol use, and 2.6% need but do not receive treatment for illicit drug use. These rates are highest among 18- to 25-year-olds.

DMHA reports the estimated percentage of eligible adults at or below 200% of the FPL that it serves annually. Data show that DMHA served less than one-third of eligible adults with chronic addiction. Table 2 displays the penetration rate by county for Central Indiana.

Table 6: Indiana Penetration Rate – Percentage of Eligible Population (at or below 200% of the FPL) that was Served by Indiana Division of Mental Health and Addiction in SFY 2007

<table>
<thead>
<tr>
<th>County</th>
<th>Chronically Addicted Adults</th>
<th>Chronically Addicted Women with Children or Pregnant</th>
<th>Total Chronic Addiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>37.0%</td>
<td>11.6%</td>
<td>35.3%</td>
</tr>
<tr>
<td>Hamilton</td>
<td>47.1%</td>
<td>15.8%</td>
<td>43.0%</td>
</tr>
<tr>
<td>Hancock</td>
<td>42.3%</td>
<td>17.2%</td>
<td>39.6%</td>
</tr>
<tr>
<td>Hendricks</td>
<td>35.6%</td>
<td>13.8%</td>
<td>32.3%</td>
</tr>
<tr>
<td>Johnson</td>
<td>19.4%</td>
<td>14.0%</td>
<td>23.4%</td>
</tr>
<tr>
<td>Marion</td>
<td>24.6%</td>
<td>13.1%</td>
<td>27.4%</td>
</tr>
<tr>
<td>Morgan</td>
<td>56.0%</td>
<td>14.6%</td>
<td>45.7%</td>
</tr>
<tr>
<td>Shelby</td>
<td>25.7%</td>
<td>9.7%</td>
<td>24.6%</td>
</tr>
<tr>
<td>Central Indiana</td>
<td>28.0%</td>
<td>13.4%</td>
<td>23.9%</td>
</tr>
<tr>
<td>Indiana</td>
<td>29.6%</td>
<td>9.9%</td>
<td>29.1%</td>
</tr>
</tbody>
</table>
Based on comments from focus groups that UWCI conducted throughout Central Indiana, the following service needs were identified:

**Hispanic Services**
- The Hispanic population in Central Indiana has increased in recent years, but bilingual, culturally competent service providers are still rare. There is a need for bicultural advocates who not only interpret but also provide cultural competency training and support.

**Additional Programs**
- More low-cost or no-cost options treatment options are necessary to match the demand for substance abuse services. Early intervention programs are especially needed to address substance abuse issues before they turn into larger problems and become more difficult to treat. Also, implementation of evidence-based youth prevention strategies is essential in reducing alcohol and drug-use prevalence.

**Legal System**
- Interventions that address treatment needs within the legal system are needed. Programs that could be implemented or expanded are:
  - **Drug courts** – The goal of drug courts is to reduce alcohol- and drug-related criminal activity. Drug courts work to accomplish this by providing offenders access to comprehensive treatment and ancillary services while under the supervision of the drug court judge.
  - **Pre-trial diversion programs (PTD)** – Pre-trial diversions programs are deferred prosecution programs for adults. The programs are an alternative to the formal criminal justice system for first-time misdemeanor offenders referred to the program by the court system. If an offender successfully completes PTD, the charges are dismissed. The purpose of the program is to reduce recidivism.
  - **Clean Lifestyle is Freedom Forever (CLIFF)** – CLIFF is a specialized intensive substance abuse treatment unit and program developed and implemented by the Indiana Department of Correction. Inmates with a significant history of substance abuse and with significant impairment caused by methamphetamine use are eligible to participate.

**Coordination/collaboration**
- Coordination and collaboration between programs and among agencies is necessary to provide a comprehensive system of care.

**Public transportation and childcare**
- Many clients find it difficult or even impossible to access treatment services because they don't have transportation or childcare available.

**Substance Abuse Prevention**
Studies have shown the effectiveness of environmental strategies in reducing alcohol and other drug use. The LAC (Law, Availability, Community) approach is promising:

- **Law** The visible enforcement of laws that regulate the use, sale, and manufacture of substances is essential to reducing substance abuse.

- **Availability** The availability of substances has been shown to greatly affect consumption. Therefore, reducing substance availability by such means as regulating the number of alcohol retail sales licenses available for gas stations and convenient stories, and segregating alcohol products from other products in grocery stores, will decrease use.

- **Community** Community norms on alcohol and drug use, i.e., what is perceived as acceptable or not within a community, have an impact on substance use patterns. Consequently, community norms that reflect intolerance of substance abuse will reduce alcohol and drug use.

A comprehensive approach incorporating prevention and treatment programs will be the most effective in dealing with substance abuse and addiction issues in Central Indiana.
Addiction is a Brain Disease

Alan I. Leshner, PhD, was director of the National Institute on Drug Abuse (NIDA) from 1994-2001. One of the scientific institutes of the U.S. National Institutes of Health, NIDA supports more than 85% of the world’s research on the health aspects of drug abuse and addiction.47

During Dr. Leshner’s tenure, NIDA published its influential Principles of Drug Addiction and Treatment, and Dr. Leshner has continued to further the understanding of addiction as a chronic, reoccurring brain disease similar to other chronic diseases such as asthma, diabetes and high blood pressure.

Dr. Leshner writes that using drugs repeatedly over time changes brain structure and function in fundamental and long-lasting ways that can persist long after the individual stops using them. Drug-induced changes in brain function may have many behavioral consequences, including the compulsion to use drugs despite adverse consequences. At its essence, addiction is a brain disease expressed in the form of compulsive drug craving, seeking and use even in the face of negative health and social consequences.48,49

There are important similarities between addictions such as alcoholism and other chronic diseases such as asthma, diabetes and high blood pressure.50

- All have controllable risk factors such as limiting drinking, limiting exposure to allergens, liming food-intake and exercising regularly.
- All have uncontrollable risk factors.
- All have a genetic influence.
- With the exception of asthma, they may result in other life-threatening medical complications.
- There is no cure for any of the diseases.
- All have clear diagnostic criteria.
- All have research-based treatment guidelines and protocols.
- All treatment protocols include effective family and patient education.

- Treatment compliance is comparable among asthma, diabetes and high blood pressure, and higher for alcoholics in treatment.
- All have comparable rates of treatment relapse that may require medical intervention.

The understanding of addiction as a chronic illness has led to improved treatment principles and modalities, and a focus on managing and maintaining an abstinent recovery.

Based on the needs of the patient, addiction treatment may encompass of combination of therapies including:51

- Behavioral therapy such as counseling, cognitive therapy or psychotherapy that teaches people ways to deal with their drug/alcohol cravings, avoid drugs and prevent relapse, help them deal with relapse, and reducing harm from potentially risky behaviors;
- Medications to control painful withdrawal symptoms, reduce drug cravings and treat co-occurring mental health disorders;
- Case management and referral to other psychological and social support services;
- Community-based supports such as Alcoholics Anonymous and Narcotics Anonymous; and
- Support from family and friends.

Treatment settings and length of time in treatment will vary based on patient needs.52

Because drug addiction is typically characterized by occasional relapses; a short-term, one-time treatment often is not sufficient. Treatment is a long-term process that involves multiple interventions and attempts at abstinence which has prompted the addictions treatment field to adopt a focus on recovery management. Rather than cycling individuals through multiple self-contained episodes of acute treatment, recovery management provides an expanded array of recovery support services for a much greater length of time but at a much lower level of intensity and cost per service episode.53
Recovery management promises important changes from traditional models including:54

- Intensifying pre-treatment recovery support services (stronger engagement, enhanced motivation for change, removing environmental obstacles);
- Intensifying in-treatment recovery support services to enhance treatment retention and effects (multi-agency intervention, global assessment, neighborhood and home-based services); and
- Supporting long-term recovery maintenance (professionally directed like other chronic health disorders, sustaining a health management partnership, recovery check-ups, education, and coaching, early re-intervention when needed).

Increasing Community Capacity / Recommendations

- To provide the best and most effective care, evidence-based programs should be implemented to prevent and treat abuse and addiction issues. Unfortunately, the mental health/addiction services system can be slow at times in adopting these best-practices approaches. It is essential to incorporate the chronic disease model of drug abuse and dependency, including the need for life-long recovery support services, into the paradigm of treatment.
- Some cultural factors also come into play. White substance abusers are more likely to receive treatment, while black individuals are more likely to be incarcerated. Fewer women than men seek help. Also, Hispanics in need of treatment often will not access the service system because of language and cultural barriers, and fear of deportation.

- The importance of good mental health is still under-recognized in our society, with more emphasis placed on physical wellbeing. This becomes evident in funding for mental health and addiction services. The disparity in compensation between services for physical illness and for mental health/addiction issues makes it difficult to attract qualified, culturally competent mental health/addiction treatment providers.
- Also, individuals in need of treatment often cannot pay the high costs of services because they either do not have insurance, their insurance does not cover substance abuse services, or they are underinsured. Insurance companies cap coverage for substance use disorders at low levels.
- In addition, serious reductions in Medicaid funding for mental health and substance use disorders seem eminent. Without approval of the federal “Protecting the Medicaid Safety Net Act of 2008” (HR 5613), the new Medicaid regulations for rehabilitative services, case management, school-based services, and public hospitals will greatly reduce the availability of care for low-income adults and children with mental health conditions.
**Where We Should Be** | **Priority** | **How to Get There** | **Financial Resources Requirements / Implications**
--- | --- | --- | ---
Federal and state laws and regulations require parity for public and private health insurance coverage and cost reimbursement between physical and mental health/addictions services. | Critical | | | | | | |
The stigma that deters people with substance abuse and gambling problems from accessing treatment is reduced through public education regarding the diagnosis and treatment of addiction as a chronic disease. | Critical | | | | | | |
Community norms and parental guidance reflect intolerance of substance abuse and problem gambling. | Critical | | | | | | |
Public funding for substance abuse and addictions services, including gambling addiction, is adequate to attract and retain qualified service providers. | Important | | | | | | |
There is adequate capacity to meet the need for drug court services in all Central Indiana counties. | Important | | | | | | |
Substance abuse, particularly among young people, decreases as a result of reduced access to alcohol, and prescription, behind the counter and other drugs and substances subject to abuse. | Important | | | | | | |
House Enrolled Act 1118

The 2008 Indiana General Assembly adopted House Enrolled Act 1118, which was co-authored by Rep. Matt Bell (R-Avilla). HEA 1118 is a complex law dealing with alcohol regulations. The definition of a grocery store is one of the law’s main components. Many communities throughout the state would like to ensure that a grocery store be considered an establishment with no more than 25% of its sales being from alcoholic beverages.

HEA 1118 limits the number of retail establishments selling alcohol in a community by establishing more stringent quotas for retail beer and liquor dealers. The Act also insists that the state provide training to local Alcohol and Tobacco Commission (ATC) boards. Stricter quotas coupled with better training should allow communities a greater ability to control their own destinies regarding the number of retail permits allowed and reduce youth access to alcohol.

The age for allowing clerks to sell alcohol would be raised to 19, preventing most high school students from selling alcohol. Clerks who sell alcohol would be required to take the same training course that restaurant servers take. The law also allows minors to participate in ATC compliance checks. Currently, the ATC has successfully used minors for tobacco-compliance checks but not for alcohol.

In addition, the law creates a two-year summer study committee charged with further investigating several issues regarding the sale of alcohol, one of which is being the clear separation of alcohol from other products. Grocery stores that choose to sell liquor would need to have it in a clearly separated area that prohibits the presence of minors unless accompanied by a parent or guardian. This would help limit minors’ access to alcohol by ensuring it is not near doors and easily accessible.

Endnotes

2 Ibid.
3 Survey Research Center at Indiana University-Purdue University Indianapolis (2005) Gaming and Betting by Adults, age 21-59, in Indiana – 2005.
7 Ibid.
10 Substance Abuse and Mental Health Services Administration. National Survey on Drug Use and Health.
15 Drug Free Marion County. pp. 11, 51.
17 Ibid.


24 Centers for Disease Control and Prevention, CDC Wonder. n.d.


26 Ibid.


34 Survey Research Center at Indiana University-Purdue University Indianapolis (2005) Gaming and Betting by Adults, Ages 21-59, in Indiana – 2005.

35 Survey Research Center at Indiana University-Purdue University Indianapolis (2005) Gaming and Betting by Adults 60 Years Old and Older in Indiana - 2005.


38 Ibid.


42 Indiana Division of Mental Health and Addiction. Indiana Number of Consumers Served Report by Region and County, SFY 2007. n.d.


44 Substance Abuse and Mental Health Services Administration. National Survey on Drug Use and Health.

45 Indiana Division of Mental Health and Addiction. Indiana Penetration Rate Report by Region and County, SFY 2007. n.d.


52 Ibid.


54 Ibid.


United Way of Central Indiana publishes the 2008 Community Assessment and provides it to the community as a credible source of information and insight for the greater Central Indiana region.
Health – Tobacco Use
INTRODUCTION

Tobacco use, primarily in the form of smoking cigarettes, is a significant public health problem in the United States. Cigarette smoking is the single most preventable cause of disease and death, causing more deaths each year than AIDS, alcohol, cocaine, heroin, homicide, suicide, motor vehicle crashes, and fires combined. Tobacco use is responsible for more than 430,000 deaths per year among adults in the United States. These deaths represent more than 5 million years of potential life lost.1

Smoking causes cancers of the oral cavity, pharynx, larynx, esophagus, lung, bladder, stomach, cervix, kidney, and pancreas, as well as acute myeloid leukemia. For smoking-attributable cancers, the risk generally increases with the number of cigarettes smoked and the number of years of smoking, and generally decreases after quitting completely.2

The leading cause of cancer deaths is lung cancer, and cigarette smoking causes most cases. Coronary heart disease is currently the leading cause of death in the U.S., and smoking can cause coronary heart disease. Cigarettes are also a major risk factor for stroke, which is the third leading cause of death in the U.S. Smoking also contributes to abdominal aortic aneurysms. Smoking affects respiratory health as well, causing chronic obstructive respiratory disease (COPD), the fourth leading cause of death in the United States. More than 90% of COPD deaths are attributable to smoking. Smoking is also related to chronic coughing and wheezing among adults, with smokers more likely than nonsmokers to have upper and lower respiratory tract infections, perhaps because smoking suppresses the immune function. Generally, lung function declines in smokers faster than in nonsmokers.3

Secondhand smoke, also called environmental tobacco smoke (ETS), has serious consequences. An estimated 50,000 deaths are attributable to ETS breathed by nonsmokers, making it the third leading cause of preventable death in the United States.4 Children, in particular, are heavily impacted by ETS, which increases their risk of developing significant lung conditions, especially asthma and bronchitis.5 Each year, ETS is associated with an estimated 8,000 to 26,000 new asthma cases in children.6 Children exposed to ETS also have an increased risk of chronic infections, fluid in the middle ear, ear infections, sore throats, chronic sore throats, stuffy noses, hoarseness, adenoidectomies and tonsillectomies.7

The use of tobacco products has wide-ranging consequences for adolescents and young adults. The younger people start smoking cigarettes, the more likely they are to become strongly addicted to nicotine. Teens who smoke are three times more likely than nonsmokers to use alcohol, eight times more likely to use marijuana, and 22 times more likely to...
use cocaine. Smoking is associated with a host of other risky behaviors, such as fighting and engaging in unprotected sex. Furthermore, smoking is associated with poor overall health and a variety of short-term adverse health effects in young people and may also be a marker for underlying mental health problems, such as depression among adolescents. Because of the wide-ranging health affects linked to smoking, the Department of Health and Human Services outlined a series of goals in its Healthy People 2010 initiative related to the use of tobacco. The most significant goals include:

- Reduce cigarette smoking to 12% for adults 18 and older.
- Reduce tobacco use by students in grades 9 through 12 to 21%.
- Increase average age of first tobacco use by adolescents from 14 to 17.
- Increase smokefree and tobacco-free environments in schools, including all school facilities, property, vehicles and school events, with a goal of 100% smokefree schools.
- Increase the proportion of worksites with formal smoking policies that prohibit smoking with a goal of 100% smokefree workplaces.
- Establish laws on smokefree indoor air that prohibit smoking in public places and worksites.
- Reduce the illegal sales rate to minors through enforcement of laws prohibiting the sale of tobacco products to minors, with a goal of an illegal sales rate of 5% or less.
- Increase the average federal and state tax on tobacco products to $2.00.

CURRENT CONDITIONS

Adult Use Patterns

The use of cigarettes by adults living in Indiana has been decreasing slowly over the past five years. National data indicate that approximately 27.6% of Hoosiers reported being current smokers in 2002. By 2006, the number of Indiana residents who said they currently smoked was 24.1%. When compared to the rest of the nation, Indiana has one of the highest rates of cigarette smoking. In fact, Indiana was ranked fifth highest in adult smoking prevalence for 2006 by the CDC. The Central Indiana area has shown a similar pattern of a slow but steady decline in the number of residents who are current smokers. Approximately 24.9% of the adults in Central Indiana reported currently smoking cigarettes in 2002. The percent of adult residents of Central Indiana who reported being current smokers in 2006 was 22.5%. The level of adult cigarette smoking in Central Indiana was consistently higher than the nation as a whole, but lower than levels reported for the entire state of Indiana. During 2006, individuals in Central Indiana with lower incomes and less education reported higher levels of current cigarette use.
Cigarette consumption differs among Central Indiana males and females, and people of different races. Data from the CDC indicate that current cigarette use is decreasing slowly for both White men and women. In 2002, 25.1% of White men in Central Indiana said they were currently smoking. By 2006, the percent of White men who reported being current cigarette smokers had decreased to 22.7%. Similarly, 30.1% of White females in Central Indiana were current smokers in 2002. In 2006, the percentage of White women who currently smoked had dropped to 23%. The trend for Central Indiana Black women was erratic over the five years studied. During 2002, 19.7% of Black females in Central Indiana reported they currently used cigarettes, compared to the 2005 percentage of 31% and 21.10% in 2006. The use of cigarettes by Black men in Central Indiana appears to be on the rise. During 2002, 23.7% of Black men living in Central Indiana reported they currently smoked cigarettes. By 2006, the number of Black men who indicated they were current cigarette smokers had risen to 39% – an increase of over 15%.\textsuperscript{13}
Very limited information regarding cigarette smoking at the county level is available. Estimates for annual use of cigarettes by adults for 2003 can be found in the MRI Consumer Lifestyle Survey. Based on this survey, Hamilton County had the lowest percentage of adults who reported past year cigarette use (21.4%) while Morgan County had the highest percentage of adults having used cigarettes in the past 12 months (29.8%). According to the 2006 Indiana Adult Tobacco Survey, in Region 5 (Boone, Clinton, Hamilton, Hancock, Hendricks, Howard, Johnson, Madison, Marion, Morgan, Shelby, and Tipton counties) 18.1% of adults are current smokers, with 14.7% reporting smoking everyday and 3.4% reporting smoking only on some days.

Cigarette use by young people in Central Indiana is on a very slow, but steady decline. During 2004, 18% of students in the 8th, 10th, and 12th grades reported having smoked during the past month. The percent of Central Indiana's 8th, 10th, and 12th graders reporting use of cigarettes in the past month during 2006 was 16.1%. The pattern of past month cigarette use during the years 2004-2006 is similar to that seen both in Indiana as a whole and nationally. As with the pattern of adult use, more young people in Central Indiana report using cigarettes than young people nationally. However, when Central Indiana is compared to the state, fewer young people in Central Indiana report having used cigarettes in the past month. When race and gender are considered, the most significant change in past month use is found for White youth: for both males and females, the percent of students who reported past month cigarette use decreased from 2002 to 2004. Black youth in Central Indiana reported consistently less use than White youth. Rates of use for Black youth remained stable across the years of data reviewed. On average, youth in Indiana reported using cigarettes for the first time between 12-14 years of age.
Smoking-Related Mortality

As indicated above, cigarette smoking is a major cause of lung cancer, coronary heart disease and chronic lower respiratory disease. In 2005, the age-adjusted mortality rate for lung cancer in Indiana was 630 per 100,000. For the same period, the age adjusted mortality rate for major cardiovascular diseases was 2,951 per 100,000. The 2005 age-adjusted mortality rate for chronic lower respiratory disease in Indiana was 543 per 100,000. The rates for the UWCI service area are provided in Table 1. The average annual age-adjusted smoking-attributable mortality rate in Indiana is 322.2 per 100,000 population, which is higher than the 284.8 per 100,000 for the nation.18

Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Lung Cancer</th>
<th>Cardiovascular Diseases</th>
<th>Chronic Lower Respiratory Disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone County</td>
<td>57.74</td>
<td>299.08</td>
<td>54.68</td>
</tr>
<tr>
<td>Hamilton County</td>
<td>38.97</td>
<td>246.43</td>
<td>43.20</td>
</tr>
<tr>
<td>Hancock County</td>
<td>61.83</td>
<td>278.25</td>
<td>71.26</td>
</tr>
<tr>
<td>Hendricks County</td>
<td>69.85</td>
<td>277.89</td>
<td>53.63</td>
</tr>
<tr>
<td>Marion County</td>
<td>74.66</td>
<td>292.13</td>
<td>64.06</td>
</tr>
<tr>
<td>Morgan County</td>
<td>65.71</td>
<td>317.47</td>
<td>77.94</td>
</tr>
<tr>
<td>Indiana</td>
<td>63.00</td>
<td>295.01</td>
<td>54.03</td>
</tr>
</tbody>
</table>

RESPONSE SYSTEMS

Policies

According to the CDC, the most effective strategies for reducing tobacco use and exposure to secondhand smoke are policy related:

- High taxes on tobacco products,
- Strong smokefree air laws, and
- Adequate investment in state comprehensive tobacco control programs.

Because of the serious health-related consequences associated with exposure to secondhand smoke, legislation at both the state and local level has been passed to help control where people can and cannot smoke when in public places. The health benefits of strong smokefree policies include reduced smoking rates, fewer youth starting to smoke, improved indoor air quality and a reduction in smoking and secondhand smoke related health conditions. At the same time, there are practical and financial benefits for offices, businesses and homes including reduced maintenance and cleaning costs, reduced fire risks, increased usable life of furniture, flooring and equipment, and reduced health insurance costs and other health related expenditures.

On a state level, smoking is either prohibited or limited to ventilated smoking areas in both childcare facilities and all government workplaces. Currently, no state-level legislation exists in Indiana regarding smoking in privately owned businesses or restaurants. Many cities and counties have passed local ordinances to control smoking in private workplaces, restaurants, and bars.19 Table 2 indicates which areas of the UWCI service area have implemented such ordinances.20
Table 2. Cities in UWCI Service Area with Smoke-Free Ordinances

<table>
<thead>
<tr>
<th>County</th>
<th>Smoke-Free Workplaces</th>
<th>Smoke-Free Restaurants</th>
<th>Smoke-Free Bars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avon, IN</td>
<td>Hendricks X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Carmel, IN</td>
<td>Hamilton X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Cumberland, IN</td>
<td>Marion X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Greenfield, IN</td>
<td>Hancock X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Indianapolis, IN</td>
<td>Marion X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Lawrence, IN</td>
<td>Marion X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Plainfield, IN</td>
<td>Hendricks X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Speedway, IN</td>
<td>Marion X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Whitestown, IN</td>
<td>Boone X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zionsville, IN</td>
<td>Boone X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

Many school districts in the UWCI area have also implemented smokefree guidelines. Within the UWCI service area, all school districts within Boone County and Hamilton County are smoke and tobacco free. Hancock, Hendricks, Marion and Morgan Counties have a portion of their districts designated as smoke and tobacco free. A detailed list and map of school districts is provided at http://www.in.gov/itpc/files/schools_total_list.pdf; http://www.in.gov/itpc/files/tfschoolsMAP0308.pdf. Of all areas in Indiana, Central Indiana has the most smokefree communities.

The Indiana General Assembly has also passed legislation to prevent minors under the age of 18 from purchasing tobacco products. Currently, Indiana’s tobacco retailer compliance laws restrict the sales and distribution of tobacco products to minors. It is also against the law to place vending machines that sell cigarettes in any area accessible to minors.

The Indiana Tobacco Retailer Inspection Program (TRIP) is a state program designed to monitor systematically the effectiveness of tobacco retail compliance. TRIP conducts random unannounced inspections of retailers by a team consisting of a police officer, youth, and adult monitor. The youth attempts to purchase tobacco from the retail clerks under unobtrusive observation by a police officer. In the event of an illegal sale, both the retail establishment and the individual clerk who sells tobacco to minors are fined as a result of this enforcement effort. Data regarding the percentage of retailers in the UWCI service area who passed inspections is provided in Table 2. Within most counties, 80% or more of retailers were found to be in compliance with the state laws. Boone County had the lowest compliance rate with fewer than 70% of retailers refusing to sell tobacco to minors. Table 3 also shows the intensity with which inspections were completed. A higher intensity of inspections indicates that more effort is being placed on enforcement. During 2007, Marion County had the highest intensity of inspections while Hancock County had the lowest. Neither Boone County nor Hendricks County completed inspections in 2007.

Table 3. Tobacco Retailer Inspection Program – Percent of Outlets which Passed Inspection (IPRC)

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boone</td>
<td>69%</td>
<td>65%</td>
<td>n/a</td>
</tr>
<tr>
<td>Hamilton</td>
<td>85%</td>
<td>88%</td>
<td>90%</td>
</tr>
<tr>
<td>Hancock</td>
<td>100%</td>
<td>97%</td>
<td>100%</td>
</tr>
<tr>
<td>Hendricks</td>
<td>95%</td>
<td>96%</td>
<td>n/a</td>
</tr>
<tr>
<td>Marion</td>
<td>90%</td>
<td>83%</td>
<td>84%</td>
</tr>
<tr>
<td>Morgan</td>
<td>90%</td>
<td>94%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Research has consistently shown that increasing the price of cigarettes reduces demand, particularly among youth. One method of increasing the price of cigarettes is by increasing the tax placed on each pack purchased. In 2007, Indiana raised the tax for a pack of cigarettes from 0.555¢ to 0.995¢, still below the national average of $1.11 per pack and far below the CDC recommended $2.00 per pack.
Agencies and Programs

- Indiana Tobacco Prevention and Cessation (ITPC) is the state agency responsible for preventing and reducing the use of all tobacco products in Indiana and protecting Indiana citizens from exposure to tobacco smoke. As the administrator of Indiana’s tobacco settlement dollars, ITPC is able to support a number of programs throughout all counties such as:
  - Action Speaks – a year-long series of protests and community events that youth conceived, planned, and executed to prevent young people from using tobacco.
  - VOICE – an organization of Indiana youth dedicated to the prevention of cigarette and tobacco use. Youth conceive, plan, and execute events served to educate youth and the community about the tactics used by the tobacco industry to get youth to start smoking. An event example is Kick Butts Days – a one-day rally against tobacco designed to raise awareness of the dangers of cigarette smoking.
  - Indiana Tobacco Quitline – a free service available for all Hoosiers to access for help quitting tobacco through telephone-based counseling.
  - Local community networks – ITPC provides grants to community-based and minority-based organizations to create coalitions and community based networks to engage the community and work on local tobacco policy changes.
    - Local health departments, hospitals, and churches in the UWCI service area sponsor community resources that help residents who would like to quit smoking.
  - Public Education campaign - Under the brand Whitelies.tv, this is a media campaign designed to educate Hoosiers on the dangers of secondhand smoke and tobacco use.
  - Smokefree Indiana – Smokefree Indiana is funded by the Indiana State Department of Health and is a statewide tobacco control coalition. Smoke Free Indiana provides education and information to tobacco users, businesses, and the community regarding the impact of cigarette and tobacco use. This program is being phased out and the ITPC will be assuming the work that was conducted by Smokefree Indiana.

Pharmaceutical Interventions

Pharmaceuticals are now available to help individuals quit tobacco. Two of the most popular drugs on the market are nicotine replacement therapies and Chantix. Nicotine replacement therapies help those dependent on cigarettes stop smoking by providing a steady supply of nicotine into the blood stream, which in turn reduces cravings for tobacco. Chantix, which is only available by prescription, works to stop cravings by blocking nicotine receptors in the brain.

FACTORS INFLUENCING CURRENT CONDITIONS

Although it is obvious that considerable resources exist within the UWCI service area to help prevent and reduce the use of tobacco, the UWCI service area still has a way to go in order to reach the goals set in Healthy People 2010. Factors that may be affecting the ability of the UWCI service area to meet the Healthy People 2010 goals include a lack of funding for adequate tobacco use prevention, inconsistent enforcement of youth access laws, and promotion of tobacco and cigarettes to adolescents through advertising and media. According to CDC estimates, Indiana needs $78.8 million to implement effective tobacco control and prevention efforts. Indiana's investment in tobacco control increased 50% to $16.2 million for state fiscal year 2008-2009, primarily because of a concurrent 44 cent per pack increase in the cigarette tax. This is 50% of the minimum level recommended by the CDC.

It is evident from reviewing data from retailer inspections that not all counties regularly complete compliance checks. During 2007, only four of the six counties in the UWCI carried out compliance checks. Considerable research exists that demonstrates an association between cigarette advertising and adolescent cigarette use. Adolescents who are exposed to and receptive to cigarette advertising and promotion are significantly more likely to smoke than those who are not.

LIKELY FUTURE DEVELOPMENTS

The trends in cigarette use in the UWCI area are decreasing. Smoking rates are anticipated to continue to decline over time in the population as a whole. Declines in the rate of smoking should lead to a decrease in the numbers of years of lives lost of residents in the UWCI service area as well as a decrease in smoking-related health problems. One area of considerable concern is the increasing rate of smoking among Black males in the UWCI service area. Without more targeted
interventions, Black males may experience a significant increase in smoking-related health problems and smoking-related deaths.

Indiana’s counties, cities, and towns are likely to continue to pass smokefree air ordinances to control smoking in private workplaces, restaurants, and bars. While smokefree air ordinances are a best practice for tobacco prevention and control, and ITPC encourages localities to adopt strong smokefree air ordinances, the need for them points to a gap in strong public policy at the state level to assure protection from secondhand smoke for all Hoosiers.

**Community’s Capacity to Address Current and Future Conditions / Recommendations**

There are three main strategies for reducing tobacco use:

- High taxes on tobacco products,
- Strong smokefree air laws, and
- Adequate investment in state comprehensive tobacco control programs.

The CDC has an extensive set of best practices for tobacco control programs. Key recommendations from the CDC include:

- Sustaining, expanding, and promoting the services available through population-based counseling and treatment programs, such as cessation quitlines,
- Eliminating cost and other treatment barriers to treatment for underserved populations,
- Restricting minors access to tobacco products, and
- Keeping the price of tobacco products high.

The CDC’s report also recommends that Indiana budget $12.46 per person to tobacco cessation programs, a total of $78.8 million dollars for the state.
As such, following are recommendations for Central Indiana related to tobacco control, prevention and cessation.

<table>
<thead>
<tr>
<th>Where We Should Be</th>
<th>Priority</th>
<th>How to Get There</th>
<th>Financial Resources Requirements / Implications</th>
</tr>
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<tbody>
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<td></td>
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<td>Public Policy Advocacy</td>
<td>Community Education</td>
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<td>The state increases restrictions on tobacco advertising and promotion to minors and increases the cigarette tax to the Healthy People 2010 recommended $2.00 per pack (at 99.5 cents Jan 2008), and dedicates 100.0% of revenue generated through cigarette tax increases to tobacco prevention, intervention and control initiatives.</td>
<td>Critical</td>
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<td>The state and localities increase the number of smoke free ordinances and compliance checks for retailers.</td>
<td>Critical</td>
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<td>Indiana increases its appropriation for tobacco prevention, control, and cessation to the Centers for Disease Control's recommended level of $78.8 million.</td>
<td>Important</td>
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<tr>
<td>Organizations currently providing services to minority communities work with Indiana Tobacco Prevention and Control to increase the availability of cessation classes within their community.</td>
<td>Important</td>
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<td>Social service and faith-based organizations work with Indiana Tobacco Prevention and Control to become part of or develop a community-based local tobacco cessation network.</td>
<td>Desirable</td>
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</tbody>
</table>
Endnotes


2. Ibid.


11. Ibid.


13. Ibid.


15. Ibid.


17. Ibid.


22. Centers for Disease Control and Prevention. State Tobacco Activities Tracking and Evaluation (STATE)


25. Ibid.


34. Lovato C, Linn G, Stead LF, Best A. Impact of tobacco advertising and promotion on increasing adolescent smoking behaviors. Cochrane Database of Systematic Review. 2003(4).

35. Centers for Disease Control and Prevention. Smoking and tobacco use.

United Way of Central Indiana publishes the 2008 Community Assessment and provides it to the community as a credible source of information and insight for the greater Central Indiana region.