Assessment of Statewide Health Needs - 2007

Selected Data from State Demographics, Vital Events, Chronic and Communicable Disease, Health Behaviors, and Health Systems

Prepared by members of the Data Analysis Team, Public Health System Development and Data Commission (PHSDD), Indiana State Department of Health. Editorial assistance was skillfully provided by Teresa Barlow.
Overview

• The material comprising this assessment was selected primarily from published reports of vital events prepared by the Indiana State Department of Health (ISDH) Data Analysis Team, annual Indiana and United States Behavioral Risk Factor Surveillance System (BRFSS) reports, ISDH Epidemiology Newsletters, the Enteric Epidemiology files, and the U.S. Census Bureau and STATS Indiana Web sites.

• Annual state vital events and BRFSS reports may be accessed at http://www.in.gov/isdh/dataandstats/data_and_statistics.htm.
• National BRFSS data are available at http://www.cdc.gov/brfss/. Both prevalence and trend data are available here.
• Current and archived issues of the ISDH Epidemiology Newsletter are available at http://www.in.gov/isdh/dataandstats/epidem/epinews_index.htm
• The U.S. Census Bureau Web site may be accessed at http://www.census.gov/.
• The STATS Indiana Web pages are available at http://www.stats.indiana.edu/.
Overview (continued)

• The information provided is not intended to be exhaustive but, rather, to present five or ten years of data to more clearly illustrate trends in Hoosier health.

• This material has not been presented in this format before, although year-by-year data are available from annual reports.

• Information on important environmental health issues and programs, e.g., Lead Poisoning Prevention, Radon, and Mercury, are not included in this assessment.

ISDH annual reports of vital events and other data reports may be accessed through the general index located at http://www.in.gov/isdh/dataandstats/data_and_statistics.htm.


Environmental Epidemiology information may be accessed at http://www.in.gov/isdh/programs/environmental/index.htm.

Radon information may be accessed at http://www.in.gov/isdh/regsvcs/radhealth/radon.htm.
Contents

• Selected Demographic Data (Indiana and the United States)
• Natality Data
  – Resident Live Births
  – Birth Rates for Selected Age Groups
  – Infant Mortality Rates
  – Factors Influencing Infant Mortality and Health
    • Prenatal care in the first trimester
    • Adequacy of prenatal care
    • Preterm births
    • Births to unmarried mothers
    • Low birthweight and very low birthweight infants
    • Mothers who breastfeed

Natality data – numbers and rates of births for selected age groups, racial groups, and ethnicities.
  - Infant mortality rates.
  - Selected factors known to influence infant health.
Contents (continued)

• Mortality Data
  – Leading Causes of Death, By Race, 2005
  – Cause-specific Mortality Data
    • Heart Disease
    • Stroke
    • Cancer (Breast, Cervical, Colon, Prostate, Lung)
    • Chronic Obstructive Pulmonary Disease (COPD)
      Chronic Lower Respiratory Disease (CLRD)
    • Accidents

Mortality data – Selected causes of death, by race, most recent year available.
Trends in cause-specific mortality rates for leading causes of death in Indiana and the U.S.
Contents (continued)

• Numbers for Other Vital Events
  – Marriages
  – Terminated Pregnancies
• Risk Factors for Disease
  – Chronic Diseases (numbers and rates)
    • Heart Disease and Stroke
    • Cancer
    • Diabetes
    • Asthma

Selected social/cultural trends in Indiana.
Risk-factor data for chronic diseases of special interest.
• Risk Factors for Disease (continued)
  – Communicable Diseases (numbers and rates)
    • HIV/AIDS
    • Hepatitis B and C
    • Chlamydia and Gonorrhea
    • Primary and Secondary Syphilis
    • Pneumonia
    • Influenza
    • *E. Coli* O157:H7
    • Tuberculosis
    • Foodborne Illness

Selected communicable disease information of relevance to public health.
Contents (continued)

- Health Behaviors and Preventive Measures
  - Tobacco Use
    - Adult smoking
    - Smoking during pregnancy
  - Physical Activity
  - Overweight and Obesity (Body Mass Index [BMI])
  - Dietary Habits
  - Oral Health
  - Immunizations
    - Children
    - Adults

Information on health behaviors influencing Hoosier health and proven preventive measures to reduce disease morbidity.
Overview of Indiana health systems: health professionals, medically underserved areas, number of health care facilities, and trends in inpatient and outpatient numbers.
I. Selected Demographic Data

Indiana and the United States, 1995, 2000, and 2005
## Selected Demographic Information
### Indiana and United States

<table>
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<td>Population</td>
<td>5,791,819</td>
<td>6,080,485</td>
<td>6,271,973</td>
<td>262,803,276</td>
<td>281,421,906</td>
<td>296,507,061</td>
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<td>Population Density (persons/square mile)</td>
<td>161.5</td>
<td>169.5</td>
<td>174.9</td>
<td>74.3</td>
<td>79.6</td>
<td>83.8</td>
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<td>Racial/Ethnic Distribution of Population</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>% White alone</td>
<td>90.8</td>
<td>89.3</td>
<td>88.6</td>
<td>83.0</td>
<td>81.1</td>
<td>80.2</td>
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<td>% Black alone</td>
<td>8.2</td>
<td>8.5</td>
<td>8.8</td>
<td>12.6</td>
<td>12.7</td>
<td>12.8</td>
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<td>% American Indian/Alaskan Native alone</td>
<td>0.2</td>
<td>0.3</td>
<td>0.3</td>
<td>0.9</td>
<td>0.9</td>
<td>1.0</td>
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<tr>
<td>% Asian/Pacific Islander alone</td>
<td>0.8</td>
<td>1.0</td>
<td>1.2</td>
<td>3.6</td>
<td>3.9</td>
<td>4.5</td>
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<td>% Two or More Race Groups</td>
<td>na</td>
<td>0.9</td>
<td>1.1</td>
<td>na</td>
<td>1.4</td>
<td>1.5</td>
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<tr>
<td>% Hispanic</td>
<td>2.1</td>
<td>3.5</td>
<td>4.5</td>
<td>10.3</td>
<td>12.5</td>
<td>14.4</td>
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<td>% of PopulationMale/Female</td>
<td>48.6</td>
<td>51.4</td>
<td>49.0</td>
<td>51.0</td>
<td>49.2</td>
<td>50.8</td>
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<td>Median Age</td>
<td>34.5</td>
<td>35.2</td>
<td>36.1</td>
<td>34.4</td>
<td>35.3</td>
<td>36.2</td>
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<td>Median household income, in dollars</td>
<td>$43,993</td>
<td>$46,242</td>
<td></td>
<td></td>
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<td>Educational Attainment (Age ≥ 25 years)</td>
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<td>High school graduate or higher</td>
<td>81.8</td>
<td>82.1</td>
<td>87.2</td>
<td>81.7</td>
<td>80.4</td>
<td>85.2</td>
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<td>Completed bachelor's degree or higher</td>
<td>16.9</td>
<td>19.4</td>
<td>22.6</td>
<td>23.0</td>
<td>24.4</td>
<td>27.7</td>
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<td>Live Births</td>
<td>82,918</td>
<td>87,697</td>
<td>87,088</td>
<td>3,899,589</td>
<td>4,058,814</td>
<td>4,112,052</td>
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<tr>
<td>% of Live Births to Females Ages 10-17 Years</td>
<td>5.5</td>
<td>4.0</td>
<td>3.3</td>
<td>5.3</td>
<td>4.1</td>
<td>3.2*</td>
</tr>
<tr>
<td>% of Live Births to Unmarried Mothers</td>
<td>32.0</td>
<td>34.6</td>
<td>40.1</td>
<td>32.2</td>
<td>33.2</td>
<td>36.8*</td>
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<tr>
<td>Fetal Deaths</td>
<td>632</td>
<td>596</td>
<td>475</td>
<td>na</td>
<td>na</td>
<td>na</td>
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<tr>
<td>Induced Termination of Pregnancy (IN occurrences)</td>
<td>11,954</td>
<td>11,767</td>
<td>10,686</td>
<td>1,210,883</td>
<td>857,475</td>
<td>na</td>
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<tr>
<td>Deaths</td>
<td>53,053</td>
<td>55,209</td>
<td>55,623</td>
<td>2,312,132</td>
<td>2,403,351</td>
<td>na</td>
</tr>
<tr>
<td>Infant deaths</td>
<td>685</td>
<td>676</td>
<td>699</td>
<td>29,583</td>
<td>28,035</td>
<td>na</td>
</tr>
</tbody>
</table>

*Provisional data

### Data Sources:
- Median household income - http://factfinder.census.gov
II. Natality Data

A. Resident Live Births
Number of Resident Live Births* by Race and Ethnicity
Indiana, 1996-2005

The number of births to Indiana residents shows a slow increase over the 10-year period for all races. The most striking change is the dramatic increase in the number of Hispanic births (173%) compared with the relatively constant number of births in the non-Hispanic population.

Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
II. Natality Data

B. Birth Rates for Selected Age Groups
Birth rates for all age groups of teenage females have been declining over the 10-year period, a very positive trend. Additional data are available in the annual natality reports at http://www.in.gov/isdh/dataandstats/natality/index.htm.
Indiana data are consistent with the national trends that show decreasing birth rates for women in their early 20s and substantial increases in birth rates for women in their 30s and 40s.

Additional data are available in the annual natality reports at http://www.in.gov/isdh/dataandstats/natality/index.htm.
II. Natality Data

C. Infant Mortality Rates
Overall, infant mortality rates have shown a very slow downward trend during the 10-year period. The mortality rates for black infants remain consistently higher than the rates for white infants.

Additional data are available in the annual mortality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
The infant mortality rates for Hispanic infants show little difference from the rates for non-Hispanic infants. Apparent differences may be due to the instability of rates based on relatively small numbers.

Additional data are available in the annual mortality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
II. Natality Data

D. Factors Influencing Infant Mortality and Health
Although the gap between the two racial groups has been narrowing somewhat, black mothers are still less likely to receive prenatal care in the first trimester than white mothers. The difference is almost 20 percent. Improvement in the percent of black mothers receiving prenatal care in the first trimester also seems to be faltering.

Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
Hispanic mothers appear to be less likely to receive prenatal care in the first trimester than non-Hispanic mothers. Overall, improvement in the percent of Hispanic mothers receiving prenatal care in the first trimester also seems to be faltering. Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
The percentage of mothers receiving "Adequate Plus" prenatal care has increased over the 10-year period; there has been an accompanying decrease in the percentage classified as only “Adequate”. There does not appear to be a net increase in the percentage of mothers receiving these two highest levels of prenatal care.

Additional data are available in the annual MCH outcomes reports at http://www.in.gov/isdh/dataandstats/mch.htm.
There has been a steady increase in the number of preterm births to mothers of both racial groups. Preterm births to black mothers remain consistently higher.

Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
There has been a steady increase in the number of preterm births to mothers of both ethnicities, although the increase among Hispanic mothers may be at a slower rate.

Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
There has been a substantial increase in births to unmarried white mothers during this 10-year period. The percentage of births to black unmarried mothers, however, while high, has not increased.

Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
There has been a substantial increase in births to unmarried non-Hispanic mothers during this 10-year period. The percentage of births to Hispanic unmarried mothers remains higher and has increased at a faster rate. Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
The percent of low birthweight infants born to white mothers has increased during the 10-year period. While the percent of low birthweight infants born to black mothers remains higher, it has not increased.

Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
The percent of low birthweight infants born to non-Hispanic mothers has increased slightly. The percent born to Hispanic mothers is lower and may actually have decreased from the 1996-1998 peak.

Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
The percent of very low birthweight infants born to mothers of either racial group has remained relatively constant over this 10-year period. Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
The percent of very low birthweight infants born to mothers of either ethnic group has remained constant over this 10-year period. The percent is the same for Hispanic and non-Hispanic mothers.

Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
Overall, the percent of mothers who are breastfeeding their infants at hospital discharge has been increasing. However, black mothers are less likely to be breastfeeding their infants at discharge than white mothers.

Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
Percent of Mothers Who Breastfed Their Infants at Hospital Discharge by Ethnicity
Indiana Residents, 1996-2005

Overall, the percent of mothers who are breastfeeding their infants at hospital discharge has been increasing among both Hispanic and non-Hispanic mothers. However, Hispanic mothers, at nearly 80 percent, are more likely to be breastfeeding their infants at discharge than non-Hispanic mothers.

Additional data are available in the annual natality and MCH outcomes reports at http://www.in.gov/isdh/dataandstats/natality/index.htm and http://www.in.gov/isdh/dataandstats/mch.htm.
III. Mortality Data
Total Number of Deaths
Indiana Residents, 1996-2005

Source: Indiana State Department of Health, PHSDD, Data Analysis Team, 2007

Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and from the National Center for Health Statistics at http://www.cdc.gov/nchs/fastats/deaths.htm.
III. Mortality Data

A. Selected Leading Causes of Death, By Race and Sex, 2005
Latest available data: 2005.
Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm.
Latest available data: 2005.
Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm.
Latest available data: 2005.

Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm.
III. Mortality Data

B. Cause-specific Mortality Data
Mortality Rates for Major Cardiovascular Diseases
Indiana and United States, 1999-2005

Indiana’s age-adjusted rate, although higher, is declining in parallel with the national rate. Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and from the National Center for Health Statistics at http://www.cdc.gov/nchs/fastats/deaths.htm.

Source: Indiana State Department of Health, PHSDD, Data Analysis Team, 2007, and National Center for Health Statistics
The age-adjusted mortality rate for heart disease for both races has declined during the five-year period. While the rate remains higher among blacks, the gap between the races appears to be closing.


Source: Indiana State Department of Health, PHSDD, Data Analysis Team, 2007
While age-adjusted mortality rates for heart disease are substantially lower for the Hispanic population than for the non-Hispanic, both are declining.

Mortality Rates for Cerebrovascular Diseases (Stroke)
Indiana and United States, 1999-2005

Age-adjusted mortality rates for cerebrovascular disease (stroke) in Indiana appear to be slightly higher than the nation as a whole, but both are declining.

Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and from the National Center for Health Statistics at http://www.cdc.gov/nchs/faststats/deaths.htm.
The age-adjusted mortality rate for stroke for both races has declined during the five-year period. While the rate remains higher among blacks, the gap between the races appears to be narrowing. (Data for 2005 may be an anomaly.)

Mortality Rates for Cerebrovascular Disease (Stroke)
All Ages by Ethnicity
Indiana Residents, 2001-2005

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
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<tbody>
<tr>
<td>Total</td>
<td>64.8</td>
<td>59.4</td>
<td>57.4</td>
<td>53.8</td>
<td>50.2</td>
</tr>
<tr>
<td>Non-Hispanic</td>
<td>65.0</td>
<td>59.7</td>
<td>57.6</td>
<td>53.8</td>
<td>50.5</td>
</tr>
<tr>
<td>Hispanic</td>
<td>43.6</td>
<td>31.9</td>
<td>33.4</td>
<td>43.1</td>
<td>24.6</td>
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</tbody>
</table>

Note: Hispanic ethnicity can be of any race.
Source: Indiana State Department of Health, PHSDD, Data Analysis Team, 2007

While age-adjusted mortality rates for stroke are lower for the Hispanic population than for the non-Hispanic, both appear to be declining.

Mortality Rates for Malignant Neoplasms (Cancer)
All Ages by Race
Indiana Residents, 2001-2005

The age-adjusted mortality rate for all cancers among blacks remains higher than the rate for whites. However, the black rate is also declining very slowly, and the gap between the races appears to be narrowing.

Mortality Rates for Malignant Neoplasms (Cancer)
All Ages by Ethnicity
Indiana Residents, 2001-2005

The age-adjusted mortality rate for all cancers among non-Hispanics is higher than the rate for Hispanics but is slowly declining. The gap between the mortality rates by ethnicity appears to be widening, with Hispanics displaying a faster decline.


Note: Hispanic ethnicity can be of any race.
Source: Indiana State Department of Health, PHSDD, Data Analysis Team, 2007
The age-adjusted mortality rates for breast cancer are virtually identical for Indiana and the U.S.; both rates are declining. Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and from the National Center for Health Statistics at http://www.cdc.gov/nchs/fastats/deaths.htm.
The age-adjusted mortality rates for cervical cancer are virtually identical for Indiana and the U.S. Both are relatively low and have remained constant in recent years.

Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and from the National Center for Health Statistics at http://www.cdc.gov/nchs/fastats/deaths.htm.
While the age-adjusted death rate for colorectal cancer in Indiana appears to be marginally higher than the rate for the U.S., both rates are slowly decreasing.

Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and from the National Center for Health Statistics at http://www.cdc.gov/nchs/fastats/deaths.htm.
The age-adjusted mortality rate for prostate cancer in Indiana is virtually identical to the rate for the U.S. Both rates have been decreasing in recent years.

Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and from the National Center for Health Statistics at http://www.cdc.gov/nchs/fastats/deaths.htm.
The age-adjusted mortality rate for lung cancer in Indiana remains substantially higher than the rate for the U.S. as a whole. Neither rate has changed substantially.

Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and from the National Center for Health Statistics at http://www.cdc.gov/nchs/fastats/deaths.htm.
Mortality Rates for Chronic Lower Respiratory Disease
All Ages by Race
Indiana Residents, 2001-2005

Although the age-adjusted mortality rate for chronic lower respiratory disease (CLRD, formerly chronic obstructive pulmonary disease [COPD]) is considerably lower for blacks than for whites, the difference in rates appears to be narrowing. Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm. U.S. data are available from the National Center for Health Statistics at http://www.cdc.gov/nchs/fastats/deaths.htm.
The age-adjusted mortality rate for CLRD (formerly COPD) is considerably lower for Hispanics than for non-Hispanics, although the trend for Hispanics in the last five years appears to be upward.

Overall, the age-adjusted mortality rates for accidents have remained fairly constant in recent years, with the rates for blacks a little lower than the rates for whites.

Mortality Rates for Accidents (Unintentional Injuries)
All Ages by Ethnicity
Indiana Residents, 2001-2005

Although the age-adjusted mortality rates for accidents have remained fairly constant for both Hispanics and non-Hispanics, Hispanics have a substantially lower rate than non-Hispanics.

IV. Numbers of Other Vital Events

A. Marriages
B. Pregnancy Terminations
Number of Marriages that Occurred in Indiana 
1998-2004

The number of marriages occurring in Indiana appears to be decreasing from the peak number in 1999. Additional data are available in the annual marriage reports at http://www.in.gov/isdh/dataandstats/marriage/index.htm.
The number of induced terminated pregnancies has declined steadily during the 10-year period 1996-2005. Additional data are available in the annual terminated pregnancy reports at http://www.in.gov/isdh/dataandstats/itp/index.htm.
V. Risk Factors for Disease

A. Chronic Diseases

The following slides present data on some of the known risk factors for a number of chronic diseases affecting Hoosiers: heart disease and stroke, as well as various cancers. Prevalence data for diabetes and asthma are also included. Certain questions on the BRFSS survey are asked only every other year because year-to-year changes are generally small. Adults are defined as non-institutionalized persons, 18 years of age and older.

Additional data and detail are available in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The self-reported prevalence of hypertension in Indiana and the U.S. appears to be very similar (about 25% of adults). Additional data and detail are available in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The percent of adults who have been told that their cholesterol is elevated has been rising in recent years, both in Indiana and the U.S.

Additional data and detail are available in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
While the percent of women (age 40 and over) who have not had a mammogram within the past two years may be decreasing slightly, the trend is irregular. Fewer Indiana women have had mammograms within the past two years than the national median.

Additional data and detail are available in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The percent of females (age 18 and over) who have had a Pap test within the past three years does not appear to have changed substantially over this eight-year period in either Indiana or the U.S.

Additional data and detail are available in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The percent of Indiana adults (age 50 and over) who have had this screening test within the past two years is consistently lower than the national median. After an initial improvement in 2002, the percents for both Indiana and the U.S. have been declining.

Additional data and detail are available in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The trends for both Indiana and the nation are encouraging. The percent of Indiana adults who have had this screening procedure rose from about 43 percent in 1999 to 56 percent in 2006. Additional data and detail are available in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The percent of men (age 40 and over) who have had a PSA screening test performed within the past two years has remained constant. Only half the number of men for whom this test is recommended have had it performed, both in Indiana and the nation.

Additional data and detail are available in the annual Indiana and national BRFSS surveys at [http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm](http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm) and [http://www.cdc.gov/brfss/](http://www.cdc.gov/brfss/).
The percent of Indiana adults diagnosed with diabetes has increased from 6 to 8 percent over this 7-year period – an increase that seems to have outpaced the national increase.

Additional data and detail are available in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The percent of adults who currently have asthma has remained relatively constant (approximately 8%) during this seven-year period, both in Indiana and the U.S.

Additional data and detail are available in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.

Source: Behavioral Risk Factor Surveillance System Survey
V. Risk Factors for Disease

B. Communicable Diseases
Rates of Total HIV-Positive, Alive, and without AIDS and Total AIDS Cases Alive
Indiana 2002-2006, Point Prevalence

<table>
<thead>
<tr>
<th>Cases per 100,000 Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
</tr>
<tr>
<td>Total HIV+, Alive, &amp; without AIDS</td>
</tr>
<tr>
<td>Total AIDS Cases Alive</td>
</tr>
</tbody>
</table>

Note: Point-prevalence data as of November 30 for each year in 2002-2006. Rates based on year 2000 population of 6,080,485.
Source: Indiana State Department of Health, December Epidemiology Newsletters for 2002-2006

The number of cases of HIV+ individuals, alive, and without AIDS has remained relatively constant over the five-year period. The number of individuals living with AIDS (per 100,000 population) has increased.

There has been an (irregular) decline in the number of reported cases of hepatitis B infection in Indiana since 1996. Additional data are available in the monthly Epidemiology Newsletters at http://www.in.gov/isdh/dataandstats/epidem/epinews_index.htm and the annual reports of infectious diseases at http://www.in.gov/isdh/dataandstats/disease/diseases_index.htm.
Chlamydia rates for both Indiana and the U.S. have shown a substantial increase in the 2000-2005 period. According to the Centers for Disease Control and Prevention (CDC), this increase is due, in part, to more and better screening tests.

Additional data are available in the monthly Epidemiology Newsletters at http://www.in.gov/isdh/dataandstats/epidem/epinews_index.htm and the annual reports of infectious diseases at http://www.in.gov/isdh/dataandstats/disease/diseases_index.htm. The data above were obtained from CDC’s STD Surveillance Reports available at http://www.cdc.gov/std/.
Gonorrhea rates for the U.S. have declined slightly during this six-year period. In Indiana, the rate per 100,000 population has increased, becoming higher than the U.S. rate for the first time in 2005.

Additional data are available in the monthly Epidemiology Newsletters at http://www.in.gov/isdh/dataandstats/epidem/epinews_index.htm and the annual reports of infectious diseases at http://www.in.gov/isdh/dataandstats/disease/diseases_index.htm. The data above were obtained from CDC’s STD Surveillance Reports available at http://www.cdc.gov/std/.
The rate of primary and secondary syphilis infection in Indiana has dropped substantially since 2000, with the Indiana rate becoming much lower than the U.S. rate (which is rising) since 2002.

Additional data are available in the monthly Epidemiology Newsletters at http://www.in.gov/isdh/dataandstats/epidem/epinews_index.htm and the annual reports of infectious diseases at http://www.in.gov/isdh/dataandstats/disease/diseases_index.htm. The data above were obtained from CDC’s STD Surveillance Reports available at http://www.cdc.gov/std/.
The age-adjusted mortality rates for pneumonia in Indiana have remained relatively constant over this seven-year period and are marginally lower than those for the nation as a whole.

Additional data are available in the annual mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm and from the National Center for Health Statistics at http://www.cdc.gov/nchs/fastats/deaths.htm.
Deaths from influenza in Indiana are highly variable and are known to be strongly influenced by the severity of the flu season. The 2004 season, for example, was considerably milder than the 2003 season, when Indiana had nearly 60 deaths from influenza.

The number of reported cases of infection with this especially troublesome strain of *E. coli* has varied widely in this 10-year period. More recent cases have been linked to the consumption of contaminated spinach and lettuce.

Additional data are available in the monthly Epidemiology Newsletters at http://www.in.gov/isdh/dataandstats/epidem/epinews_index.htm and the annual reports of infectious diseases at http://www.in.gov/isdh/dataandstats/disease/diseases_index.htm.
The number of reported cases of tuberculosis in Indiana has leveled off in recent years from the 1996 peak of 202. Deaths from tuberculosis have been declining from the 1996 peak of 24.

Additional data are available in the monthly Epidemiology Newsletters at http://www.in.gov/isdh/dataandstats/epidem/epinews_index.htm, the annual reports of infectious diseases at http://www.in.gov/isdh/dataandstats/disease/diseases_index.htm, and the mortality reports at http://www.in.gov/isdh/dataandstats/mortality/mortality_index.htm.

Source: Indiana State Department of Health, PHSDD, Data Analysis Team, 2007, and the ISDH Reports of Infectious Diseases.
Number of Cases of Illness due to Three Enteric Pathogens
Indiana Residents, 1997-2006

<table>
<thead>
<tr>
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<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Campylobacter</td>
<td>571</td>
<td>605</td>
<td>512</td>
<td>591</td>
<td>505</td>
<td>511</td>
<td>555</td>
<td>445</td>
<td>473</td>
<td>578</td>
</tr>
<tr>
<td>E. coli 0157:H7</td>
<td>76</td>
<td>91</td>
<td>107</td>
<td>131</td>
<td>90</td>
<td>87</td>
<td>91</td>
<td>58</td>
<td>77</td>
<td>95</td>
</tr>
<tr>
<td>Salmonella</td>
<td>586</td>
<td>677</td>
<td>572</td>
<td>678</td>
<td>549</td>
<td>599</td>
<td>587</td>
<td>527</td>
<td>686</td>
<td>899</td>
</tr>
</tbody>
</table>

Source: Indiana State Department of Health, Enteric Epidemiology Files

Approximately half the cases of transmissible enteric illnesses are due to the norovirus (calicivirus) group of agents and are not reportable because the viruses are considered endemic. The other half are due to infection primarily with Campylobacter, E. coli, and Salmonella. Of these three, the number of cases of illness due to Salmonella strains has shown a substantial increase in 2005 and 2006.

Additional data are available in the monthly Epidemiology Newsletters at http://www.in.gov/isdh/dataandstats/epidem/epinews_index.htm, the annual reports of infectious diseases at http://www.in.gov/isdh/dataandstats/disease/diseases_index.htm, and Enteric Epidemiology.
VI. Health Behaviors and Preventive Measures

The following slides present data on some behaviors and preventive measures known to have an impact on one's health. Certain questions on the BRFSS survey are asked only every other year because year-to-year changes are generally small. Adults are defined as non-institutionalized persons, 18 years of age and older.
Percent of Adults Who Are Current Smokers
Indiana and National Median

![Graph showing percent of adults who are current smokers for Indiana and the US median from 2000 to 2006.]

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indiana</td>
<td>26.9</td>
<td>27.4</td>
<td>27.6</td>
<td>26.1</td>
<td>24.9</td>
<td>27.3</td>
<td>24.1</td>
</tr>
<tr>
<td>National Median</td>
<td>23.2</td>
<td>23.2</td>
<td>23.2</td>
<td>22.0</td>
<td>20.9</td>
<td>20.6</td>
<td>20.0</td>
</tr>
</tbody>
</table>

Source: Behavioral Risk Factor Surveillance System Survey

Although the percent of Indiana adults who are current smokers (24.1% in 2006) has declined in recent years, Indiana remains above the national median by about 4 percent.

Additional data and detail are presented in the annual Indiana and national BRFSS surveys [http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm](http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm) and [http://www.cdc.gov/brfss/](http://www.cdc.gov/brfss/).
Although the percent of births to Indiana mothers who smoked during pregnancy has decreased during this 7-year period (from ~21% to ~18%), the percent for Indiana remains higher than the U.S. (by ~ 8%).

The percent of Indiana mothers who smoked during pregnancy has decreased over the 10-year period (from ~21% to ~18%). While the percent of black mothers who reported smoking during pregnancy has remained lower than the percent of white mothers, the difference between the two may be narrowing.

The percent of Indiana mothers who smoked during pregnancy has decreased during the 10-year period (from ~21% to ~18%). The percent of Hispanic mothers who reported smoking during pregnancy remains dramatically lower than the percent of white mothers and continues to decline.

The percent of Indiana adults who reported no leisure time physical activity during the past month remained relatively constant over this 7-year period (~ 25%); this is about 3 percent higher than the national median.

Additional data and detail are presented in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The percent of Indiana adults classified as obese on the basis of body mass index (BMI) has increased about 6 percent during this 6-year period. The percent has paralleled the national trend but remains consistently above the national median. Additional data and detail are presented in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The percent of adults who report consuming at least five servings of fruits and vegetables each day has not changed substantially during this six-year period, either in Indiana or the U.S. In both cases, only about 20 percent of adults meet the recommendations.

Additional data and detail are presented in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The percent of Indiana adults age 65 and over who have had all their natural teeth extracted appears to be above the national median. There are relatively few data available at present, however, to assess this.

Additional data and detail are presented in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/b rfss/b rfss_index.htm and http://www.cdc.gov/b rfss/.
The percent of Indiana adults who have had a dental visit within the past year has remained constant at about 67 percent, slightly lower than the national median.

Additional data and detail are presented in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.

Source: Behavioral Risk Factor Surveillance System Survey
This graph presents two measures of the adequacy of childhood immunization. The percent of Indiana 2-year-olds who have received the 4:3:1:3:3 series has increased from ~57 percent in 1996 to ~80 percent in 2005, although the rate of improvement has leveled off in recent years. The percent who have received the more recent series including varicella (chickenpox) vaccine has continued to improve.

Data from the National Immunization Survey available at http://www.cdc.gov/nis/.

### Table of Immunization Percentages

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4:3:1:3:3</td>
<td>56.7</td>
<td>62.7</td>
<td>68.8</td>
<td>65.3</td>
<td>72.0</td>
<td>71.1</td>
<td>76.0</td>
<td>79.0</td>
<td>79.0</td>
<td>78.1</td>
</tr>
<tr>
<td>4:3:1:3:3:1</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>n/a</td>
<td>59.4</td>
<td>62.3</td>
<td>68.2</td>
<td>69.9</td>
</tr>
</tbody>
</table>

*2-year-old children refers to children ages 19-35 months according to the National Immunization Survey.

Note: The 4:3:1:3:3 series is four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MCV, three or more doses of Hb, and three or more doses of HepB. The 4:3:1:3:3:1 series is four or more doses of DTP, three or more doses of poliovirus vaccine, one or more doses of any MCV, three or more doses of Hb, three or more doses of HepB, and one or more doses of varicella vaccine.

Source: U.S. Department of Health & Human Services, Centers for Disease Control and Prevention, National Immunization Surveys.
The percent of Indiana adults (age ≥ 65) who have not received the recommended flu shot has remained high in recent years and above the national median.

Additional data and detail are presented in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
The percent of Indiana adults (age ≥ 65) who have not received the recommended pneumonia vaccine has declined in recent years and is similar to the national median.

Additional data and detail are presented in the annual Indiana and national BRFSS surveys at http://www.in.gov/isdh/dataandstats/brfss/brfss_index.htm and http://www.cdc.gov/brfss/.
VII. Health Systems

A. Licensed Health Professionals, Medically Underserved Areas (MUA), and Health Professional Shortage Areas (HPSA)
<table>
<thead>
<tr>
<th>Licensed Health Professionals: Indiana 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physicians</strong></td>
</tr>
<tr>
<td>Physician</td>
</tr>
<tr>
<td>Osteopathic Physician</td>
</tr>
<tr>
<td>Medical Resident Pmt</td>
</tr>
<tr>
<td><strong>Dentists and Hygienists</strong></td>
</tr>
<tr>
<td>Dentist</td>
</tr>
<tr>
<td>Dental Hygienist</td>
</tr>
<tr>
<td><strong>Nurses</strong></td>
</tr>
<tr>
<td>Registered Nurse</td>
</tr>
<tr>
<td>Clinical Nurse Specialist</td>
</tr>
<tr>
<td>Licensed Practical Nurse</td>
</tr>
<tr>
<td>Nurse Practitioner</td>
</tr>
<tr>
<td>Certified Nurse/Midwife</td>
</tr>
<tr>
<td>Nurse/Midwife</td>
</tr>
</tbody>
</table>

Source: [http://www.stats.indiana.edu/web/county/hprof05.html](http://www.stats.indiana.edu/web/county/hprof05.html)

**Data on MUAs and HPSAs are available at:**
[http://www.in.gov/isdh/publications/partner_rel/shortages/shortage.htm](http://www.in.gov/isdh/publications/partner_rel/shortages/shortage.htm)

These data provide a brief summary of the number of currently (2005) licensed health professionals practicing in Indiana and a link to additional information.

Statistical data on MUAs and HPSAs are available on the ISDH Web site at [http://www.in.gov/isdh/publications/llo/shortages/shortage.htm](http://www.in.gov/isdh/publications/llo/shortages/shortage.htm).

Additional information may be found in the following maps of Primary Care, Dental, and Mental Health HPSAs and Indiana MUAs.
INDIANA PRIMARY CARE HEALTH PROFESSIONAL SHORTAGE AREAS AND POPULATIONS

April, 2007

[Map of Indiana showing primary care health professional shortage areas and populations]
VII. Health Systems

B. Health Care Facilities and Statistics
These data provide a brief overview of Indiana's Ambulatory Surgical Centers, Hospitals, and Certified Comprehensive Nursing Facilities.
This graph illustrates the changing patterns of health care in Indiana as represented by the increasing ratio of outpatient visits to inpatient discharges from 2002 to 2006 and the increasing ratio of outpatient to inpatient surgeries.
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• Christopher Waldron

Jon E. Lewis
12/17/07

Individuals who have supplied the majority of information for this assessment.