Maternal and Child Health Indicators: Three State Profile

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Mentor: Alexandra Adams, MD, PhD

Great Lakes Inter-Tribal Council / Great Lakes Epi Center

- Located on the Lac du Flambeau Band of Chippewa Indians Reservation lands outside Lac du Flambeau about 12 miles from Woodruff
- The Epi Center is housed in the GLITC offices but is a separate entity funded, in part, by a competitive grant from the Indian Health Service
Great Lakes Epi Center Staff

• Allison LaPointe, Minnesota Epidemiologist
• Kimmine Pierce, Michigan Epidemiologist
• Olivia Byron-Cooper, Wisconsin Epidemiologist
• Kristin Hill, Director

Great Lakes Epi Center

• Serves a total of 34 American Indian Tribes and 3 urban programs within the Bemidji Area (Minnesota, Wisconsin, Michigan)
• Provides public health training and technical assistance to the Bemidji Area Tribes in the areas of: program planning and evaluation, health survey design, health data collection, data management, analysis and interpretation
• The epidemiologists were previously dedicated one to each state. However, the Epi Center is reorganizing so that each epidemiologist serves all three states in a particular area. Maternal and child health is one of the areas.
• My project, developing an MCH focused report, had the added benefit of assisting the MCH epidemiologist in researching issues in MCH.
In general, anything related to the health of women and children can be considered an MCH indicator.
Maternal and Child Health Data Indicators

Therefore: What MCH data are available and are relevant to American Indians in the 3-state area?

Report Development: Step 1

Basic research
Literature search, and search for available data.
Report Development: Step 2

Consult with Great Lakes Epi Center staff
Briefings on Minnesota, Wisconsin and Michigan Tribes.
Access to basic vital statistics data.
Briefings on the mission of the Epi Center and their interest in MCH.

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Report Development: Step 3

Consult with Bemidji Area Tribes
Meetings with Tribal Health Directors in each of the three states.
Teleconference with Tribal staff with interest in MCH.
Maternal and Child Health
Data Indicators

Total Population
Total Women 15-44
Total Children 0-17
American Indian Population
American Indian Women 15-44
American Indian Children 0-17
Percent American Indian Population
Percent American Indian Children
Percent American Indian Women


Maternal and Child Health
Data Indicators

American Indian Births
Average Age of Mother
Average Birthweight (gms)
Average Prenatal Visits
Average Gestational Age (wks)
Percent Low Birthweight
Percent High Birthweight
American Indian Deaths
Average Age at Death
Percent Natural Deaths

State vital statistics, Wisconsin, Minnesota and Michigan. Averages calculated using SAS. Natural deaths exclude homicides, suicides, accidental and intentional fatal injuries.
### Maternal and Child Health Data Indicators

**Poverty Rate All Races**  
**Poverty Rate All Children**  

**Estimated Number CYSHCN**  
**Estimated American Indian CYSHCN**  
SLAITS CSHCN Survey summaries downloaded from  
[http://www.cdc.gov/nchs/about/major/slaits/cshcn.htm](http://www.cdc.gov/nchs/about/major/slaits/cshcn.htm). Number of CYSHCN calculated using county prevalence for all races and national prevalence for American Indian/Alaska Native children.

### Maternal and Child Health Data Indicators

<table>
<thead>
<tr>
<th>Total Adult Arrests</th>
<th>Total Juvenile Arrests</th>
<th>Adult Drug Arrests</th>
<th>Juvenile Drug Arrests</th>
<th>Total Drug Arrests</th>
<th>% Adult Drug-Related</th>
<th>% Juvenile Drug-Related</th>
<th>% Total Drug Related</th>
</tr>
</thead>
</table>

Wisconsin: Office of Justice Assistance, 2004 Crime and Arrests Report. Downloaded from:  
Minnesota: Department of Public Safety, Minnesota Crime Information 2004. Downloaded from:  
Michigan: State Police, Uniform Crime Reports. Downloaded from:  
[http://www.state.mi.us/mjsp/cjs/stats/crime_reports.htm](http://www.state.mi.us/mjsp/cjs/stats/crime_reports.htm)
Maternal and Child Health
Data Indicators

Induced Abortions All Women
Abortion Rate/1,000 Women

State % Ever Breastfed
State % Breastfed 12 months

Maternal and Child Health
Data Indicators

State 2004 WIC Participation

State Diabetes Prevalence
State Gestational Diabetes
State % Smoke Everyday
Maternal and Child Health
Data Indicators

State Immunization Rates

State % Children w/ Excellent or Very Good Health
State % Children w/ Asthma
State % Children w/ Socio-Emotional Difficulties
State % Children w/ Medical Home

Maternal and Child Health
Data Indicators

Infant Deaths by Race
CDC, MMWR Weekly, June 23, 2006 / 55(24); 683.

1999-2003 Leading Causes of Death
All Races
American Indian/Alaska Native
Maternal and Child Health Data Indicators

Overweight % Age 2-5

Physical Education Requirements, Grades 6-12

Adult Obesity Rates by State

Maternal and Child Health Data Indicators

Adult Inactivity Rates by Race
CDC, MMWR Weekly, October 7, 2005 / 54(39); 991-994.

Mental Health by Race
Self-assessed symptoms of serious psychological distress
CDC MMWR Weekly, July 28, 2006 / 55(29); 801.
Maternal and Child Health
Draft Report

Produced as a Word template with merge fields populated from an Excel spreadsheet.

Bemidji Area
Bemidji Area - 2004

Population:

<table>
<thead>
<tr>
<th>Category</th>
<th>Total</th>
<th>American Indian/Alaska Native</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Races</td>
<td>20,722,604</td>
<td>177,225</td>
</tr>
<tr>
<td>Women 15-44</td>
<td>4,363,147</td>
<td>42,974</td>
</tr>
<tr>
<td>Children (0-17)</td>
<td>5,081,705</td>
<td>55,109</td>
</tr>
</tbody>
</table>

Percent American Indian/Alaska Native:

- Total: 0.9%
- Women 15-44: 0.8%
- Children (0-17): 1.1%

American Indian/Alaska Native Births/Deaths:

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Deaths</td>
<td>1,118</td>
<td></td>
</tr>
<tr>
<td>Average Age of Mother</td>
<td>25.8</td>
<td>Average Age at Death: 59.9</td>
</tr>
<tr>
<td>Average Prenatal Visits</td>
<td>10.7</td>
<td>Percent Natural Deaths: 85%</td>
</tr>
<tr>
<td>Average Gestational Age (weeks)</td>
<td>38.8</td>
<td></td>
</tr>
<tr>
<td>Average Birthweight (grams)</td>
<td>3,390</td>
<td></td>
</tr>
<tr>
<td>Percent Low Birthweight</td>
<td>6.9%</td>
<td></td>
</tr>
<tr>
<td>Percent High Birthweight</td>
<td>14.2%</td>
<td></td>
</tr>
</tbody>
</table>
### Children and Youth with Special Health Care Needs:

<table>
<thead>
<tr>
<th>Estimated County Total CYSHCN:</th>
<th>527,592</th>
<th>State % Children w/Asthma</th>
<th>8.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated County AI-AN CYSHCN:</td>
<td>9,148</td>
<td>National % AI-AN Children w/Asthma</td>
<td>12.5%</td>
</tr>
<tr>
<td>State % Children w/ Excellent or Very Good Health</td>
<td>87.1%</td>
<td>State % Children w/ Socio-Emotional Difficulties</td>
<td>9.7%</td>
</tr>
<tr>
<td>State % Children w/ Medical Home</td>
<td>48.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Community Indicators – All Races:

<table>
<thead>
<tr>
<th>Poverty Rate (All Ages/All Races):</th>
<th>9.7</th>
<th>Total Adult Arrests:</th>
<th>617,966</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty Rate (All Children):</td>
<td>13.2</td>
<td>Total Juvenile Arrests:</td>
<td>152,990</td>
</tr>
<tr>
<td>Induced Abortions (All Women):</td>
<td>47,976</td>
<td>Total Drug Arrests:</td>
<td>77,422</td>
</tr>
<tr>
<td>Abortion Rate (Per 1,000 Women):</td>
<td>11.0</td>
<td>Percent Arrests Drug-Related:</td>
<td>7.0%</td>
</tr>
</tbody>
</table>

### State Health Indicators:

- **Diabetes:** Bemidji Area total diabetes prevalence is 6.5%. An additional 0.8% of women reported being diagnosed with gestational diabetes. CDC estimates that American Indians and Alaska Natives are on average about 2.2 times more likely to have diabetes than non-Hispanic whites. About 15.1% of American Indians and Alaska Natives 20 and older receiving care from the Indian Health Service have diabetes.

- **Tobacco:** 16.5% of Bemidji Area adults report smoking every day. Nationally, 18.5% of women and 28.5% of American Indian/Alaska Native women smoke. Women who smoke during pregnancy have a greater chance of complications, premature birth, low birth weight infants, stillbirth, and infant mortality.

- **Nutrition:** 71.0% of Bemidji Area women reported initiating breastfeeding. 17.1% reported breastfeeding at 12 months. In FY2004, 448,940 residents of the Bemidji 3-state area participated in the WIC program.

- **Weight and Activity:** According to the Pediatric Nutrition Surveillance System (PedNSS), 13.4% of children ages 2 to 5 in the Bemidji Area are overweight. Nationally, American Indian/Alaska Native children 2 to 5 are most likely to be overweight. 19% are overweight compared to 12.6% of white children and 12.2% of black children. In schools where physical education classes are required in any grade from grade 6 to grade 12, 93.9% of Bemidji Area schools teach a required physical education class in grade 9 compared to only 26.8% in grade 12. 20-24% of adults in Minnesota and Wisconsin and more than 25% of adults in Michigan are considered obese (BMI >= 30). 23.7% of adults nationwide report no leisure-time physical activity. 31.8% of American Indian/Alaska Native women and 23.8% of American Indian/Alaska Native men report no leisure-time physical activity compared to 21.6% of white women and 18.4% of white men. Hispanic men (32.5%) and Hispanic women (39.6%) were most likely to report no leisure-time physical activity.
Leading Causes of Death: In the Bemidji Area, the top ten leading causes of death for American Indians and Alaska Natives for 1999-2003 are: (1) Heart Disease, (2) Malignant Neoplasms, (3) Unintentional Injury, (4) Diabetes, (5) Chronic Lower Respiratory Disease, (6) Cerebrovascular, (7) Liver Disease, (8) Suicide, (9) Nephritis, and (10) Influenza & Pneumonia. By comparison, the top ten leading causes of death for all races are: (1) Heart Disease, (2) Malignant Neoplasms, (3) Cerebrovascular, (4) Chronic Lower Respiratory Disease, (5) Unintentional Injury, (6) Diabetes, (7) Influenza & Pneumonia, (8) Alzheimer’s Disease, (9) Nephritis, and (10) Suicide.

Infant Deaths: Infant mortality decreased from 1995 to 2003. American Indian/Alaska Native infant mortality rates are lower than for blacks, but significantly higher than infant mortality rates for whites, Hispanics, and Asian/Pacific Islanders. In 2003, the infant mortality rate (deaths of infants less than 1 year per 1,000 live births) was 13.61 for blacks, 8.73 for American Indian/Alaska Natives, 5.7 for whites, 5.64 for Hispanics and 4.83 for Asian/Pacific Islanders.

Vaccination Coverage: By 24 months of age, to be up-to-date on all vaccinations, children should have received 4 or more doses of DTP, 3 or more doses of poliovirus vaccine, 1 or more doses of any MCV, 3 or more doses of Hib, and 3 or more doses of HepB. In the Bemidji Area, 76.6% of all children have met this standard.

Mental Health: Nationally, for 2000-2004, American Indian/Alaska Native women were most likely to have self-assessed symptoms of serious psychological distress. The National Health Interview Survey compiled scores for six psychological distress questions that asked: “During the past 30 days, how often did you feel (1) so sad that nothing could cheer you up, (2) nervous, (3) restless or fidgety, (4) hopeless, (5) that everything was an effort, or (6) worthless?” A score of 13 or higher on a 24 point scale was used to define serious psychological distress. 9.7% of American Indian/Alaska Native women and 3.9% of American Indian/Alaska Native men scored 13 or higher. By comparison, only 3.5% of white women and 2.5% of white men reported serious psychological distress.

Final Report Wrap

1. List of documentation.

2. List of literary sources.

3. List of MCH related websites.

4. List of suggestions for additional information to be added when available.
Next Steps

• Great Lakes Epi Center will make decisions on what to include from the draft report in a final report.

• Results will be presented to the Tribes.

• The finalized MCH report will be produced every other year. In off years, the current community health data profile will be produced.