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National Center for Chronic Disease Prevention and Health Promotion,
Division of Population Health, Epidemiology and Surveillance Branch
(CDC/NCCDPHP/DPH/ESB)

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Introduction:
The 500 Cities Project – Better Health Through Local Data – is a collaboration between the Robert Wood Johnson Foundation, the CDC Foundation, and the Centers for Disease Control and Prevention (CDC). The purpose of the project is to provide high quality small area estimates for behavioral risk factors that influence health status; for health outcomes; and the use of clinical preventive services. These estimates can be used to identify emerging health problems and to inform development and implementation of effective, targeted public health prevention activities.

Data sources:

Methodology:
CDC used small area estimation (SAE) methodology called multi-level regression and poststratification (MRP) that links geocoded health surveys and high spatial resolution population demographic and socioeconomic data to produce local level health-related estimates. This approach also accounts for the associations between individual health outcomes, individual characteristics, and spatial contexts and factors at multiple levels (e.g. state, county); predicts individual disease risk and health behaviors in a multi-level modeling framework, and estimates the geographic distributions of population disease burden and health behaviors at city and census tract levels.

Further information on the small area estimation methodology can be obtained from:
- Validation of Multilevel Regression and Poststratification Methodology for Small Area Estimation of Health Indicators from the Behavioral Risk Factor Surveillance System.

Limitations:
All data presented in this map book are model-based estimates that reflect the statistically expected prevalence of each measure. These small area estimates tend to have narrow confidence ranges and may underestimate some areas with high prevalence or overestimate some areas with low prevalence. Because the small area model cannot detect effects due to local interventions, these model-based local estimates should not be used to evaluate the effect of local public health programs, policies, or interventions.

For more information please refer to http://www.cdc.gov/500cities/.

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Four of the measures were not included in the 2016 BRFSS, therefore 2015 estimates are presented here. For details on measure definitions, please refer to: https://www.cdc.gov/500cities/measure-definitions.htm.
<table>
<thead>
<tr>
<th>Measure</th>
<th>Crude (%)</th>
<th>State Age-adjusted Prevalence (%)</th>
<th>US Age-adjusted Prevalence (%)</th>
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<tr>
<td>Measure</td>
<td>Prevalence</td>
<td>Lower 95% CI</td>
<td>Upper 95% CI</td>
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<tr>
<td>Arthritis among adults aged &gt;=18 years</td>
<td></td>
<td>23.1</td>
<td>23.0</td>
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<td>Current asthma prevalence among adults aged &gt;=18 years</td>
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<td>34.1</td>
</tr>
<tr>
<td>High cholesterol among adults aged &gt;=18 years who have been screened in the past 5 years</td>
<td>34.4</td>
<td>34.3</td>
<td>34.5</td>
</tr>
<tr>
<td>Diagnosed diabetes among adults aged &gt;=18 years</td>
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<td>11.8</td>
<td>11.9</td>
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<tr>
<td>Chronic kidney disease among adults aged &gt;=18 years</td>
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<td>3.2</td>
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<tr>
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<tr>
<td>Physical health not good for &gt;=14 days among adults aged &gt;=18 years</td>
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<td>All teeth lost among adults aged &gt;=65 years</td>
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<td>20.8</td>
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<tr>
<td>Current lack of health insurance among adults aged 18-64 years</td>
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<td>17.7</td>
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<td>Visits to doctor for routine checkup within the past year among adults aged &gt;=18 years</td>
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<td>71.6</td>
<td>71.7</td>
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<td>Visits to dentist or dental clinic among adults aged &gt;=18 years</td>
<td>58.7</td>
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<td>Taking medicine for high blood pressure control among adults aged &gt;=18 years with high blood pressure</td>
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<td>72.3</td>
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<td>Cholesterol screening among adults aged &gt;=18 years</td>
<td>69.7</td>
<td>69.5</td>
<td>69.9</td>
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<tr>
<td>Mammography use among women aged 50-74 years</td>
<td>81.1</td>
<td>80.9</td>
<td>81.3</td>
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<td>Papanicolaou smear use among adult women aged 21-65 years</td>
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<td>61.7</td>
<td>61.4</td>
<td>61.9</td>
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<td>Up to date on a core set of clinical preventive services (flu shot past year, pneumococcal shot ever, colorectal cancer screening) among men aged &gt;=65 years</td>
<td>24.5</td>
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<tr>
<td>Up to date on a core set of clinical preventive services (same as men plus mammogram past 2 years) among women aged &gt;=65 years</td>
<td>26.2</td>
<td>25.9</td>
<td>26.6</td>
</tr>
<tr>
<td>Binge drinking prevalence among adults aged &gt;=18 years</td>
<td>23.1</td>
<td>23.1</td>
<td>23.2</td>
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<tr>
<td>Current smoking among adults aged &gt;=18 years</td>
<td>22.4</td>
<td>22.1</td>
<td>22.6</td>
</tr>
<tr>
<td>No leisure-time physical activity among adults aged &gt;=18 years</td>
<td>27.7</td>
<td>27.5</td>
<td>27.9</td>
</tr>
<tr>
<td>Obesity among adults aged &gt;=18 years</td>
<td>37.2</td>
<td>37.1</td>
<td>37.3</td>
</tr>
<tr>
<td>Sleeping less than 7 hours among adults aged &gt;=18 years</td>
<td>39.2</td>
<td>39.1</td>
<td>39.3</td>
</tr>
</tbody>
</table>
Health Outcomes
Arthritis among adults aged ≥18 years by census tract, Milwaukee, WI, 2016

Legend depicts only those data classes Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Census tracts with population less than 50 were excluded from the map.

Data sources:
Current asthma prevalence among adults aged ≥18 years by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities’ census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
Cancer (excluding skin cancer) among adults aged ≥18 years by census tract, Milwaukee, WI, 2016

Map created by CDC/NCCEH/DPH/EESB-GIS

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Data sources:
CDC BRFSS 2016, US Census Bureau
2010 Census, ACS 2012-2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts.
Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.
High blood pressure among adults aged ≥18 years by census tract, Milwaukee, WI, 2015

Percent (%)
- 4.9 - 17.2
- 17.3 - 22.6
- 22.7 - 26.5
- 26.6 - 30.0
- 30.1 - 33.8
- 33.9 - 38.4
- 38.5 - 44.1
- 44.2 - 50.6
- 50.7 - 71.0

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
CDC BRFSS 2015, US Census Bureau
2010 Census, ACS 2011-2015
High cholesterol among adults aged ≥18 years who have been screened in the past 5 years by census tract, Milwaukee, WI, 2015

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
CDC BRFSS 2015, US Census Bureau
2010 Census, ACS 2011-2015
Diagnosed diabetes among adults aged ≥18 years by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
Chronic kidney disease among adults aged >18 years by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:

Map created by CDC/NCIDD/HP2/PHESB-GIS
Chronic obstructive pulmonary disease among adults aged >18 years by census tract, Milwaukee, WI, 2016

Map created by CDC/NCIDD/DPH/ESB-GIS

Legend depicts only those data classes within this map extent.

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts.

Census tracts with population less than 50 were excluded from the map.

Data sources:
Coronary heart disease among adults aged >18 years by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:

Map created by CDC/NCCEPH/DPH/ESB-GIS

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Date: 8/8/2018
Stroke among adults aged 18 years and older by census tract, Milwaukee, WI, 2016

Percent (%)
- 0.2 - 2.0
- 2.1 - 2.8
- 2.9 - 3.6
- 3.7 - 4.6
- 4.7 - 5.9
- 6.0 - 7.3
- 7.4 - 9.0

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:

Date: 8/17/2018
Physical health not good for 14 or more days among adults aged 18 years and older by census tract, Milwaukee, WI, 2016

Percent (%)
- 3.2 - 7.7
- 7.8 - 9.7
- 9.8 - 11.6
- 11.7 - 13.5
- 13.6 - 15.5
- 15.6 - 17.6
- 17.7 - 19.9
- 20.0 - 22.8
- 22.9 - 35.8

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities’ census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:

Map created by CDC/NCCDPHP/DPH/ESB-GIS
All teeth lost among adults aged 18 years and older by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
Use of Preventive Services
Current lack of health insurance among adults aged 18-64 years by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
Visits to doctor for routine checkup within the past year among adults aged ≥18 years by census tract, Milwaukee, WI, 2016

Percent (%)
- 61.5 - 64.4
- 64.5 - 67.2
- 67.3 - 70.0
- 70.1 - 73.0
- 73.1 - 76.2
- 76.3 - 79.8
- 79.9 - 91.3

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:

Map created by CDC/NCID/PHP/OPHE/ESB-GIS
Taking medicine for high blood pressure control among adults aged ≥18 years with high blood pressure by census tract, Milwaukee, WI, 2015

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:

Map created by CDC/NCCDPHP/DPH/ESB-GIS
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Cholesterol screening among adults aged ≥18 years by census tract, Milwaukee, WI, 2015

Map created by CDC/NCDC/OFHP/PH/EHS-GIS

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Data sources:
CDC BRFSS 2015, US Census Bureau
2010 Census, ACS 2011-2015

Date: 6/15/2018

Legend depicts only those data classes within this map extent.

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts.

Census tracts with population less than 50 were excluded from the map.

Percent (%)
21.7 - 47.1
47.2 - 56.5
56.6 - 62.2
62.3 - 66.8
66.9 - 70.9
71.0 - 74.8
74.9 - 78.9
79.0 - 83.5
83.6 - 95.5

City boundary
Mammography use among women aged 50-74 years by census tract, Milwaukee, WI, 2016

Map created by CDC/NCCDPHP/DPH/ESB-GIS

Percent (%)
- 65.7 - 68.6
- 68.7 - 71.2
- 71.3 - 73.7
- 73.8 - 76.1
- 76.2 - 78.5
- 78.6 - 81.0
- 81.1 - 87.1

Classification:
- Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
- CDC BRFSS 2016, US Census Bureau
- 2010 Census, ACS 2012-2016.
Papanicolaou smear use among adult women aged 21-65 years by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
Fecal occult blood test, sigmoidoscopy, or colonoscopy among adults aged 50-75 years by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
CDC BRFSS 2016, US Census Bureau
2010 Census, ACS 2012-2016
Older adults men aged ≥65 years who are up to date on a core set of clinical preventive services by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
CDC BRFSS 2016, US Census Bureau
2010 Census, ACS 2012-2016

Map created by CDC/NCI/DPH/ESB-GIS
Older adults women aged >65 years who are up to date on a core set of clinical preventive services by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities’ census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
CDC BRFSS 2016, US Census Bureau
2010 Census, ACS 2012-2016
Unhealthy Behaviors
Binge drinking prevalence among adults aged >18 years by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
Current smoking among adults aged ≥18 years by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:

Map created by CDC/NCDC/PHP/DPHE/ESB-GIS
No leisure-time physical activity among adults aged ≥18 years by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
Obesity among adults aged 18 years and older by census tract, Milwaukee, WI, 2016

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities' census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources:
CDC BRFSS 2016, US Census Bureau
2010 Census, ACS 2012-2016
Sleeping less than 7 hours among adults aged 18 years and older by census tract, Milwaukee, WI, 2016

Percent (%)
- 16.1 - 28.1
- 28.2 - 31.1
- 31.2 - 33.8
- 33.9 - 36.3
- 36.4 - 38.9
- 39.0 - 41.7
- 41.8 - 44.9
- 45.0 - 48.7
- 48.8 - 58.7

Classification:
Jenks natural breaks (9 classes) based on data for all 500 cities’ census tracts. Legend depicts only those data classes within this map extent.

Census tracts with population less than 50 were excluded from the map.

Data sources: