

What it will take: Investing in Wisconsin's future by keeping kids safe today

Appendices for "Risk and protective factors related to child abuse and neglect"

The brief "Risk and protective factors related to child abuse and neglect" contains information on commonly cited risk factors for child abuse and neglect by researchers. The box at the right describes the process for determining risk levels across counties, and the brief provides maps of each category of risk factors as well as the overall risk for child maltreatment across Wisconsin counties. The appendices that follow provide county-level data on indicators for each of the risk factors that were discussed in the brief.

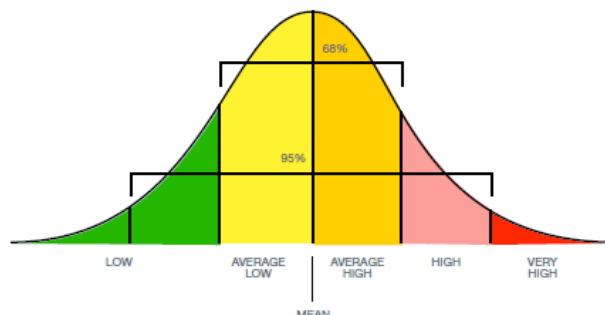
CALCULATING RISK LEVELS BY COUNTY

For each grouping of risk factors (parental, familial, child, and economic), county-level data were gathered from various sources, such as the Wisconsin Interactive Statistics for Health (WISH) and Wisconsin's Behavioral Risk Factor Survey, to determine risk levels across counties. The process for assigning risk levels was as follows:

1. Categorize risk factors into four domains: parent characteristics, family situations, child characteristics, and economic circumstances.
2. Gather and standardize county-level data on each risk factor.
3. Average standardized scores across risk factors to achieve a mean score for each domain.
4. Average the domain scores to achieve an overall county risk score, and assign risk levels according to standard deviations from the mean.

In the maps throughout the brief, counties are color-coded based on their risk level. As shown in the chart below, the risk levels were assigned and color-coded as follows:

- low – green: more than 1 standard deviation below the mean;
- average/low – yellow: within 1 standard deviation below the mean;
- average/high – orange: at the mean or within 1 standard deviation above the mean;
- high – pink: between 1 and 2 standard deviations above the mean; and
- very high – red: more than 2 standard deviations above the mean.



Appendix I: Parent Characteristics

	Adult alcohol use (% of total population) ⁱ	Inpatient hospitalization due to self-inflicted injury (% of total population) ⁱⁱ	Bad mental health days (average percent of days last month) ⁱⁱⁱ	Low maternal educational attainment (% of births to mothers who had less than high school education) ^{iv}	Births to teen mothers (% of births to teen mothers) ^v
	<i>DHS Behavioral Risk Survey 2004-06</i>	<i>DHS Burden of Suicide Report 2001-2006</i>	<i>DHS Behavioral Risk Survey 2005-2007</i>	<i>DHS WISH System 2008</i>	<i>DHS WISH System 2008</i>
Adams	64%	0.06%	10.00%	18.03%	19.13%
Ashland	64%	0.27%	12.67%	15.66%	12.12%
Barron	51%	0.07%	16.33%	16.04%	8.71%
Bayfield	64%	0.15%	8.00%	7.14%	6.35%
Brown	75%	0.11%	10.33%	15.65%	8.87%
Buffalo	66%	0.06%	7.67%	7.97%	n/a
Burnett	64%	0.03%	9.67%	17.57%	12.16%
Calumet	70%	0.05%	8.00%	7.11%	4.11%
Chippewa	61%	0.10%	10.33%	10.60%	7.27%
Clark	53%	0.07%	8.00%	44.44%	3.82%
Columbia	65%	0.08%	10.33%	9.51%	5.83%
Crawford	57%	0.10%	10.33%	8.67%	10.71%
Dane	74%	0.10%	9.33%	9.96%	5.06%
Dodge	66%	0.09%	13.67%	10.69%	7.13%
Door	70%	0.07%	7.67%	11.07%	5.93%
Douglas	62%	0.01%	11.67%	8.30%	8.72%
Dunn	71%	0.09%	n/a	8.24%	7.76%
Eau Claire	68%	0.16%	10.00%	9.74%	6.69%
Florence	58%	0.04%	9.33%	n/a	n/a
Fond du Lac	72%	0.11%	6.33%	11.86%	6.96%
Forest	53%	0.19%	8.67%	18.37%	11.22%
Grant	55%	0.07%	8.00%	11.90%	7.44%
Green	63%	0.08%	13.00%	8.46%	7.69%
Green Lake	69%	0.06%	14.67%	23.39%	9.63%
Iowa	54%	0.06%	9.00%	6.15%	3.38%
Iron	70%	0.08%	7.67%	n/a	n/a
Jackson	68%	0.10%	14.67%	21.49%	8.68%
Jefferson	59%	0.08%	12.67%	11.77%	6.13%
Juneau	64%	0.08%	11.33%	15.64%	10.55%
Kenosha	63%	0.09%	12.33%	15.87%	11.10%
Kewaunee	71%	0.07%	6.67%	8.49%	4.72%
La Crosse	60%	0.16%	9.67%	6.22%	6.45%
Lafayette	62%	0.06%	8.00%	13.08%	6.54%
Langlade	56%	0.06%	14.00%	9.27%	10.73%
Lincoln	61%	0.07%	14.00%	13.88%	9.15%
Manitowoc	67%	0.11%	8.33%	14.70%	7.73%
Marathon	67%	0.05%	9.33%	9.92%	6.95%
Marinette	63%	0.09%	8.33%	12.88%	8.59%
Marquette	61%	0.09%	10.67%	16.45%	6.58%
Menominee	66%	0.16%	10.67%	18.46%	26.15%
Milwaukee	56%	0.08%	12.33%	23.24%	13.23%

	Adult alcohol use (% of total population)	Inpatient hospitalization due to self-inflicted injury (% of total population)	Bad mental health days (average percent of days last month)	Low maternal educational attainment (% of births to mothers who had less than high school education)	Births to teen mothers (% of births to teen mothers)
	<i>DHS Behavioral Risk Survey</i> 2004-06	<i>DHS Burden of Suicide Report</i> 2001-2006	<i>DHS Behavioral Risk Survey</i> 2005-2007	<i>DHS WISH System</i> 2008	<i>DHS WISH System</i> 2008
Monroe	60%	0.12%	10.67%	22.85%	8.90%
Oconto	68%	0.10%	15.00%	11.40%	7.69%
Oneida	74%	0.14%	9.33%	9.06%	10.00%
Outagamie	77%	0.09%	9.00%	8.26%	5.91%
Ozaukee	62%	0.07%	7.67%	3.77%	3.16%
Pepin	62%	0.06%	9.67%	18.29%	n/a
Pierce	71%	0.05%	5.67%	3.21%	3.70%
Polk	73%	0.05%	7.67%	6.69%	8.66%
Portage	63%	0.12%	9.67%	8.48%	7.37%
Price	66%	0.07%	10.67%	6.48%	6.48%
Racine	60%	0.13%	10.33%	20.69%	10.85%
Richland	63%	0.08%	12.33%	20.17%	10.73%
Rock	56%	0.08%	12.00%	18.88%	10.21%
Rusk	74%	0.07%	5.33%	18.13%	10.63%
Saint Croix	75%	0.02%	11.33%	2.78%	3.52%
Sauk	65%	0.08%	6.33%	15.78%	8.28%
Sawyer	57%	0.18%	10.67%	11.86%	9.79%
Shawano	65%	0.08%	11.67%	13.97%	8.43%
Sheboygan	76%	0.18%	10.67%	10.83%	8.20%
Taylor	57%	0.06%	9.33%	14.57%	3.94%
Trempealeau	64%	0.09%	8.67%	17.71%	6.48%
Vernon	67%	0.07%	8.33%	34.23%	3.38%
Vilas	63%	0.15%	5.67%	7.43%	10.29%
Walworth	76%	0.06%	8.00%	18.89%	7.56%
Washburn	69%	0.05%	9.33%	10.12%	9.52%
Washington	75%	0.05%	6.33%	6.23%	5.97%
Waukesha	59%	0.06%	8.33%	4.40%	2.93%
Waupaca	69%	0.07%	8.33%	11.62%	9.07%
Waushara	68%	0.09%	8.00%	27.80%	10.24%
Winnebago	62%	0.13%	11.00%	10.49%	6.91%
Wood	68%	0.09%	13.00%	7.01%	9.67%

Note: Values of “n/a” indicate that no data was available for that county in that particular year. For the purposes of calculating risk levels, in counties where any data was available between 2005 and 2009, the county’s mean across years in which data was available was used as an estimate for 2008. In counties where no data was available between 2005 and 2009, the average county mean across the state was used.

Appendix II: Family Situations

	Births to single moms (% of all births) ^{vi}	Domestic abuse incidents per 1,000 people ^{vii}
	<i>DHS WISH System</i>	<i>DOJ Domestic Abuse Report</i>
	<i>2008</i>	<i>2008</i>
Adams	46%	4.92%
Ashland	39%	4.97%
Barron	38%	3.36%
Bayfield	28%	3.28%
Brown	38%	5.02%
Buffalo	28%	2.11%
Burnett	45%	4.51%
Calumet	20%	2.12%
Chippewa	31%	3.84%
Clark	17%	2.59%
Columbia	31%	7.37%
Crawford	43%	2.25%
Dane	28%	6.75%
Dodge	30%	4.44%
Door	28%	2.45%
Douglas	43%	6.42%
Dunn	30%	3.33%
Eau Claire	32%	5.86%
Florence	43%	3.65%
Fond du Lac	34%	3.39%
Forest	48%	7.21%
Grant	30%	2.50%
Green	35%	5.82%
Green Lake	30%	3.88%
Iowa	23%	3.94%
Iron	42%	1.29%
Jackson	40%	2.21%
Jefferson	32%	5.52%
Juneau	36%	5.63%
Kenosha	44%	4.45%
Kewaunee	27%	2.65%
La Crosse	30%	8.43%
Lafayette	29%	4.47%
Langlade	42%	1.39%
Lincoln	36%	2.78%
Manitowoc	30%	4.02%
Marathon	28%	5.16%
Marinette	38%	3.71%
Marquette	29%	3.65%
Menominee	84%	n/a
Milwaukee	55%	9.91%
Monroe	32%	5.65%
Oconto	28%	2.93%
Oneida	32%	3.41%

	Births to single moms (% of all births)	Domestic abuse incidents per 1,000 people
	<i>DHS WISH System</i>	<i>DOJ Domestic Abuse Report</i>
	<i>2008</i>	<i>2008</i>
Outagamie	25%	4.65%
Ozaukee	17%	1.46%
Pepin	20%	2.72%
Pierce	26%	3.38%
Polk	38%	3.12%
Portage	25%	0.79%
Price	31%	3.15%
Racine	48%	5.62%
Richland	34%	3.11%
Rock	47%	7.48%
Rusk	31%	7.37%
Saint Croix	21%	5.35%
Sauk	34%	5.05%
Sawyer	51%	3.86%
Shawano	38%	3.59%
Sheboygan	29%	4.33%
Taylor	29%	3.37%
Trempealeau	34%	4.17%
Vernon	20%	n/a
Vilas	45%	5.29%
Walworth	37%	4.26%
Washburn	30%	3.71%
Washington	23%	3.44%
Waukesha	19%	2.50%
Waupaca	34%	5.80%
Waushara	28%	2.38%
Winnebago	31%	5.29%
Wood	36%	4.15%

Note: Values of "n/a" indicate that no data was available for that county in that particular year. For the purposes of calculating risk levels, in counties where any data was available between 2005 and 2009, the county's mean across years in which data was available was used as an estimate for 2008. In counties where no data was available between 2005 and 2009, the average county mean across the state was used.

Appendix III: Child Characteristics

	Low birth weight (% of all births) ^{viii}	Birth to 3 participation (% of total child population) ^{ix}	Special education participation for children with primary emotional/behavioral disability (% of total child population) ^x
	<i>DHS WISH System</i> 2008	<i>DHS</i> 2008	<i>DPI</i> 2008
Adams	6.56%	4.17%	2.11%
Ashland	4.55%	4.18%	2.78%
Barron	6.34%	3.61%	1.11%
Bayfield	3.97%	2.66%	1.55%
Brown	6.29%	2.49%	1.44%
Buffalo	10.14%	1.85%	0.66%
Burnett	7.43%	3.08%	1.93%
Calumet	5.37%	3.12%	0.58%
Chippewa	6.91%	3.69%	1.07%
Clark	5.21%	2.40%	0.65%
Columbia	7.36%	1.68%	1.18%
Crawford	10.20%	3.18%	0.74%
Dane	6.03%	2.49%	1.17%
Dodge	6.29%	3.74%	0.77%
Door	6.72%	2.21%	1.23%
Douglas	7.02%	2.99%	1.14%
Dunn	4.47%	4.03%	1.41%
Eau Claire	4.95%	3.23%	1.10%
Florence	n/a	1.92%	0.27%
Fond du Lac	6.53%	2.46%	1.14%
Forest	9.18%	3.31%	2.01%
Grant	5.79%	1.37%	1.09%
Green	7.69%	2.33%	0.99%
Green Lake	5.50%	2.19%	0.94%
Iowa	4.31%	2.01%	1.10%
Iron	n/a	1.47%	1.05%
Jackson	6.61%	1.07%	1.75%
Jefferson	6.63%	4.57%	1.10%
Juneau	5.45%	1.59%	1.03%
Kenosha	8.63%	3.08%	0.88%
Kewaunee	5.66%	1.52%	0.97%
La Crosse	6.60%	2.91%	1.06%
Lafayette	4.21%	1.63%	0.41%
Langlade	4.88%	2.68%	1.29%
Lincoln	5.36%	2.52%	0.96%
Manitowoc	8.26%	6.03%	1.08%
Marathon	6.00%	2.81%	0.98%
Marinette	6.57%	2.29%	1.19%
Marquette	6.58%	2.09%	1.95%
Menominee	n/a	2.73%	2.42%
Milwaukee	8.95%	2.70%	0.75%
Monroe	5.64%	2.72%	0.89%

	Low birth weight (% of all births)	Birth to 3 participation (% of total child population)	Special education participation for children with primary emotional/behavioral disability (% of total child population)
	<i>DHS WISH System</i> 2008	<i>DHS</i> 2008	<i>DPI</i> 2008
Oconto	5.98%	3.10%	0.98%
Oneida	7.81%	5.08%	1.28%
Outagamie	8.35%	2.74%	0.93%
Ozaukee	5.60%	4.27%	0.89%
Pepin	6.10%	2.53%	1.62%
Pierce	5.19%	1.81%	1.25%
Polk	4.33%	2.65%	1.19%
Portage	6.12%	2.71%	0.76%
Price	6.48%	3.08%	1.23%
Racine	9.47%	2.43%	1.39%
Richland	3.00%	3.21%	0.93%
Rock	5.49%	1.81%	1.33%
Rusk	6.88%	2.53%	1.10%
Saint Croix	6.11%	1.83%	1.46%
Sauk	4.79%	2.25%	1.37%
Sawyer	6.70%	3.76%	0.97%
Shawano	5.76%	2.44%	1.09%
Sheboygan	6.13%	4.82%	1.36%
Taylor	7.09%	1.40%	0.82%
Trempealeau	4.24%	1.98%	1.15%
Vernon	5.18%	1.53%	0.86%
Vilas	8.00%	4.58%	1.73%
Walworth	5.12%	3.03%	0.69%
Washburn	6.55%	3.06%	1.24%
Washington	6.43%	2.80%	0.83%
Waukesha	6.55%	3.04%	0.85%
Waupaca	7.62%	2.77%	1.01%
Waushara	3.90%	0.82%	0.63%
Winnebago	6.85%	2.09%	1.15%
Wood	6.91%	2.37%	1.21%

Note: Values of "n/a" indicate that no data was available for that county in that particular year. For the purposes of calculating risk levels, in counties where any data was available between 2005 and 2009, the county's mean across years in which data was available was used as an estimate for 2008. In counties where no data was available between 2005 and 2009, the average county mean across the state was used.

Appendix IV: Economic Circumstances

	W-2 Recipients (% of total population) ^{xi}	Unemployment Rate (% of total population) ^{xii}	Food Share Participation (% of total population) ^{xiii}	Percent Below Poverty (% of total population) ^{xiv}
	<i>DCF 2008</i>	<i>DWD 2008</i>	<i>DHS 2008</i>	<i>US Census 2007</i>
Adams	0.24%	6.80%	16.92%	14.40%
Ashland	0.25%	5.90%	21.14%	17.50%
Barron	0.14%	5.60%	15.02%	11.90%
Bayfield	0.09%	6.50%	9.17%	11.50%
Brown	0.17%	4.40%	10.37%	10.30%
Buffalo	0.03%	4.10%	9.33%	8.90%
Burnett	0.06%	7.00%	14.84%	13.20%
Calumet	0.07%	4.20%	6.40%	5.30%
Chippewa	0.09%	5.10%	12.90%	10.20%
Clark	0.07%	5.40%	8.36%	11.50%
Columbia	0.08%	4.90%	9.47%	7.00%
Crawford	0.12%	5.70%	11.84%	11.70%
Dane	0.21%	3.30%	8.07%	10.90%
Dodge	0.14%	4.90%	8.24%	8.30%
Door	0.08%	5.20%	7.37%	7.40%
Douglas	0.27%	5.10%	15.40%	14.60%
Dunn	0.19%	4.20%	12.43%	14.00%
Eau Claire	0.13%	4.00%	11.74%	13.00%
Florence	0.13%	5.70%	12.90%	11.60%
Fond du Lac	0.09%	4.70%	8.88%	8.40%
Forest	0.13%	6.70%	11.01%	16.50%
Grant	0.04%	4.60%	7.91%	11.70%
Green	0.06%	4.50%	9.00%	7.70%
Green Lake	0.08%	5.40%	9.89%	9.10%
Iowa	0.03%	4.50%	9.18%	8.50%
Iron	0.15%	7.70%	12.38%	11.60%
Jackson	0.17%	5.50%	11.78%	13.10%
Jefferson	0.07%	4.70%	7.89%	7.10%
Juneau	0.08%	5.80%	12.04%	11.60%
Kenosha	0.60%	5.30%	15.73%	11.80%
Kewaunee	0.05%	4.30%	6.62%	7.30%
La Crosse	0.09%	3.80%	10.81%	13.20%
Lafayette	0.06%	4.10%	8.55%	9.00%
Langlade	0.15%	5.90%	17.82%	11.70%
Lincoln	0.09%	5.60%	11.10%	9.90%
Manitowoc	0.03%	4.90%	7.85%	8.60%
Marathon	0.11%	4.40%	10.31%	8.00%
Marinette	0.06%	5.90%	12.80%	11.20%
Marquette	0.09%	6.20%	13.88%	10.20%
Menominee	0.50%	10.40%	39.84%	34.10%
Milwaukee	1.29%	5.50%	22.36%	18.20%
Monroe	0.12%	4.50%	11.19%	12.80%
Oconto	0.04%	6.10%	10.26%	9.90%

	W-2 Recipients (% of total population)	Unemployment Rate (% of total population)	Food Share Participation (% of total population)	Percent Below Poverty (% of total population)
	<i>DCF</i> <i>2008</i>	<i>DWD</i> <i>2008</i>	<i>DHS</i> <i>2008</i>	<i>US Census</i> <i>2007</i>
Oneida	0.12%	6.00%	11.72%	9.80%
Outagamie	0.11%	4.50%	7.40%	6.70%
Ozaukee	0.06%	3.70%	3.85%	4.50%
Pepin	0.01%	4.60%	9.95%	10.60%
Pierce	0.04%	4.20%	5.29%	7.30%
Polk	0.03%	5.70%	9.75%	8.70%
Portage	0.11%	4.40%	9.30%	12.10%
Price	0.11%	4.90%	13.82%	11.10%
Racine	0.34%	5.60%	14.56%	9.20%
Richland	0.08%	4.60%	13.21%	11.50%
Rock	0.25%	6.10%	15.33%	10.70%
Rusk	0.05%	6.90%	18.44%	14.40%
Saint Croix	0.04%	4.30%	13.71%	5.30%
Sauk	0.06%	4.80%	7.82%	9.10%
Sawyer	0.07%	6.80%	35.22%	12.30%
Shawano	0.20%	5.10%	7.69%	10.70%
Sheboygan	0.18%	4.40%	3.53%	7.90%
Taylor	0.10%	6.40%	12.11%	11.10%
Trempealeau	0.09%	4.40%	10.54%	9.50%
Vernon	0.03%	4.70%	9.76%	13.60%
Vilas	0.03%	6.30%	9.07%	10.50%
Walworth	0.08%	4.60%	9.56%	9.60%
Washburn	0.04%	6.50%	15.53%	12.40%
Washington	0.08%	4.20%	5.66%	5.20%
Waukesha	0.06%	3.90%	3.27%	4.10%
Waupaca	0.11%	5.20%	9.35%	8.90%
Waushara	0.06%	5.70%	12.82%	12.60%
Winnebago	0.15%	4.30%	9.52%	9.30%
Wood	0.33%	5.30%	13.52%	9.10%

Note: Values of "n/a" indicate that no data was available for that county in that particular year. For the purposes of calculating risk levels, in counties where any data was available between 2005 and 2009, the county's mean across years in which data was available was used as an estimate for 2008. In counties where no data was available between 2005 and 2009, the average county mean across the state was used.

What it will take: Investing in Wisconsin's future by keeping kids safe today

These appendices are for the brief "Risk and protective factors related to child abuse and neglect." That report is one in a series published by the Children's Trust Fund (CTF), Wisconsin's state agency for the prevention of child maltreatment, and the Wisconsin Council on Children and Families, a private, not-for-profit research and advocacy organization.

The series includes "Child maltreatment prevention: Where we stand and directions for the future" which summarizes research conducted by CTF, the state Department of Children & Families, and the University of Wisconsin–Madison School of Social Work and the Institute for Research on Poverty; and five background briefs:

1. Child abuse and neglect prevention: What is it and how do we know when it works?
2. Best practices in child abuse and neglect prevention
3. Current trends in approaches to child abuse and neglect prevention
4. Risk and protective factors related to child abuse and neglect
5. Prevalence of child abuse and neglect in Wisconsin

All materials can be downloaded from www.wccf.org/what_it_will_take.php.

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This appendix was prepared by Katie Maguire-Jack.

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ⁱ Department of Health Services. (2008). *Wisconsin Epidemiological Profile on Alcohol and Other Drug Use*. Retrieved December 14, 2009 from <http://dhs.wisconsin.gov/stats/pdf/alcoholconsumption2008.pdf>.

ⁱⁱ Wisconsin Department of Health Services. (2008). *The Wisconsin Burden of Suicide Report*. Retrieved December 14, 2009 from <http://www.mhawisconsin.org/Uploads/prevention/bosfinal9.5.pdf>.

ⁱⁱⁱ Wisconsin Department of Health Services. (2010). Information reported in the *Wisconsin Behavioral Risk Factor Survey* and obtained from Division of Public Health on September 10, 2009.

^{iv} Wisconsin Department of Health Services. (2010). *Wisconsin Interactive Statistics on Health*. Retrieved April 1, 2010 from <http://dhs.wisconsin.gov/wish/>.

^v Wisconsin Department of Health Services. (2010). *Wisconsin Interactive Statistics on Health*.

^{vi} Wisconsin Department of Health Services. (2010). *Wisconsin Interactive Statistics on Health*.

^{vii} Wisconsin Department of Justice. (2010). Office of Crime Victim Services Publications: Domestic Abuse Incidence Reports. http://www.doj.state.wi.us/cvs/OCVS_pages/OCVS_Publications.asp.

^{viii} Wisconsin Department of Health Services. (2010). *Wisconsin Interactive Statistics on Health*.

^{ix} Wisconsin Department of Health Services. (2010). Information obtained from WI Birth to Three Program Special Education Coordinator March 11, 2010.

^x Wisconsin Department of Public Instruction. (2010). Information obtained from Special Education Team March 4, 2010.

^{xi} Wisconsin Department of Children and Families. (2010). *W-2 unduplicated most recent participant placements by county/tribe by calendar year*. Retrieved April 1, 2010 from: <http://dcf.wisconsin.gov/researchandstatistics/rsdata/w2data.htm#Unduplicated>.

^{xii} Wisconsin Department of Workforce Development. (2010). *Local Area Unemployment Statistics*. Retrieved April 1, 2010 from: <http://worknet.wisconsin.gov/worknet/dalaus.aspx?menuselection=da>.

^{xiii} Wisconsin Department of Health Services. (2010). *FoodShare unduplicated recipients served by agency by calendar year*. Retrieved April 1, 2010 from: <http://dhs.wisconsin.gov/em/rsdata/fs-undup- recip-by-cy.htm>.

^{xiv} U.S. Census Bureau. (2010). *State and County Quick Facts*. Retrieved April 1, 2010 from <http://quickfacts.census.gov/qfd/states/55000.html>.