**Methods section**

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4. **Attributable number of asthma incident cases by median household income**

**Tables**

1. **Census data description**

|  |  |  |
| --- | --- | --- |
|  |  |  |
| Geographic characteristics | Total populated census blocks | 6,182,882 |
| Total census-designated urban areas | 3,590,278 |
| Demographic characteristics | Total population | 73,690,271 |
| Total population of children (birth – 18) |  |
| Mean (range) number of children in census blocks |  |
| Population of children by living location | Rural | 13,763,183 |
| Urban clusters (≥2,500 and <50,000 people) | 6,994,464 |
| Urbanized area (≥50,000 people) | 52,932,624 |
| Population of children by median household income | <20,000 | 2,614,804 |
| 20,000 to <35,000 | 12,770,843 |
| 35,000 to <50,000 | 18,573,954 |
| 50,000 to <75,000 | 21,953,876 |
| ≥75,000 | 17,763,239 |

1. **Summary of pollutant concentrations using populated census blocks only**

|  |  |
| --- | --- |
| **NO2 µg/m3** |  |
| Mean |  |
| Min |  |
| 25% |  |
| 50% |  |
| 75% |  |
| Max |  |

1. **Total childhood asthma incident cases, attributable number of cases, and percentage of cases due to NO2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Asthma incident cases | AC | % of all asthma cases |
|  | Total | 751,259 | 132,644 | 17.7 |
| By living location (% of Total) | Rural | 141,225 | 13,848 | 9.8 |
| Urban cluster | 71,016 | 9,285 | 13.1 |
| Urbanized area | 539,017 | 109,511 | 20.3 |
| By median household income | <20,000 | 27,578 | 5,740 | 20.8 |
| 20,000 to <35,000 | 133,225 | 24,807 | 18.6 |
| 35,000 to <50,000 | 189,512 | 32,352 | 17.1 |
| 50,000 to <75,000 | 222,769 | 37,596 | 16.9 |
| ≥75,000 | 178,029 | 32,121 | 18 |

1. **Comparing results of state-specific asthma incidence rate with national incidence rate**
2. **Air pollution concentration by state**
3. **Air pollution concentration by strata**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Mean | Min | Median | Max |
| Total |  |  |  |  |  |
| By living location | Rural |  |  |  |  |
| Urban cluster |  |  |  |  |
| Urbanized area |  |  |  |  |
| By median household income | <20,000 |  |  |  |  |
| 20,000 to <35,000 |  |  |  |  |
| 35,000 to <50,000 |  |  |  |  |
| 50,000 to <75,000 |  |  |  |  |
| ≥75,000 |  |  |  |  |

1. **Childhood asthma survey summary survey count**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **2006** | **2007** | **2008** | **2009** | **2010** |
| **Ever asthma** |  |  |  |  |  |
| **<12 month** |  |  |  |  |  |
| **At-risk** |  |  |  |  |  |
| **Prevalence** |  |  |  |  |  |
| **IR per 1,000** |  |  |  |  |  |
|  |  |  |  |  |  |

1. **Childhood asthma survey summary weighted counts**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **2006** | **2007** | **2008** | **2009** | **2010** |
| **Ever asthma** |  |  |  |  |  |
| **<12 month** |  |  |  |  |  |
| **At-risk** |  |  |  |  |  |
| **Prevalence** |  |  |  |  |  |
| **IR per 1,000** |  |  |  |  |  |
| **Missing** |  |  |  |  |  |

1. **Aggregate childhood asthma incidence rate by state**

|  |  |
| --- | --- |
| **State** | **IR per 1000** |
| **Arizona** | 18.04 |
| **California** | 10.22 |
| **Connecticut** | 12.05 |
| **District of Columbia** | 13.76 |
| **Georgia** | 8.64 |
| **Illinois** | 6.66 |
| **Indiana** | 16.91 |
| **Iowa** | 5.96 |
| **Kansas** | 8.80 |
| **Louisiana** | 5.77 |
| **Maine** | 10.18 |
| **Maryland** | 12.03 |
| **Michigan** | 10.86 |
| **Mississippi** | 14.04 |
| **Missouri** | 14.96 |
| **Montana** | 3.99 |
| **Nebraska** | 9.53 |
| **New Hampshire** | 11.85 |
| **New Jersey** | 9.76 |
| **New Mexico** | 6.67 |
| **New York** | 14.34 |
| **Ohio** | 15.05 |
| **Oklahoma** | 10.77 |
| **Oregon** | 11.06 |
| **Pennsylvania** | 13.16 |
| **Rhode Island** | 14.26 |
| **Texas** | 16.19 |
| **Utah** | 10.41 |
| **Vermont** | 11.87 |
| **Washington** | 6.77 |
| **West Virginia** | 11.83 |
| **Wisconsin** | 12.26 |

**Figures**

1. **“Never asthma”, “Newly diagnosed asthma case” and “At-risk population” from the Behavioral Risk Factor Surveillance System (BRFSS) and Asthma Call-back Survey (ACBS) data sets, 2006–2010.**

***Boxplots***

1. **NO2 concentration**
2. **NO2 concentration by living location**
3. **NO2 concentration by median income grp**
4. **NO2 concentration by living location stratified into median income grp**
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***Scatter plots***

1. **Median income by NO2 concentration by living location (color)**
2. **Median income by AF by living location (color)**