**Methods section**

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4. **Exposure assessment models**
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1. **Asthma incident cases**
2. **Attributable number of asthma incident cases**
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**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 | Urbanized area (≥50,000 people) | 13,763,183 |
| Urban clusters (≥2,500 and <50,000 people) | 6,994,464 |
| Rural | 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. **Estimated asthma incident cases among children**

|  |  |  |
| --- | --- | --- |
|  | Total | 751,106 |
| By living location (% of Total) | Urbanized area | 141,193 |
| Urban clusters | 71,004 |
| Rural | 538,909 |
| By median household income | <20,000 | 27,572 |
| 20,000 to <35,000 | 133,195 |
| 35,000 to <50,000 | 189,469 |
| 50,000 to <75,000 | 222,725 |
| ≥75,000 | 177,999 |

1. **Attributable number of childhood asthma incident cases and percentage of asthma incident cases due to TRAP**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | AC | % of all asthma cases |
| Total |  | 132,622 | 17.7 |
| By living location | Urbanized area | 13,845 | 9.8 |
| Urban clusters | 9,283 | 13.1 |
| Rural | 109,494 | 20.3 |
| By median household income | <20,000 | 5,739 | 20.8 |
| 20,000 to <35,000 | 24,803 | 18.6 |
| 35,000 to <50,000 | 32,346 | 17.1 |
| 50,000 to <75,000 | 37,590 | 16.9 |
| ≥75,000 | 32,117 | 18 |

1. **Air pollution concentration by state**
2. **Air pollution concentration by strata**

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

1. **Asthma survey summary survey count**

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

1. **Asthma survey summary weighted counts**

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

1. **Asthma survey summary survey count by state**
2. **Asthma survey summary weighted counts by state**

**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**
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6. **NO2 concentration by state**
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9. **Attributable Fraction (AF)**
10. **AFconcentration by living location**
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12. **AFconcentration by living location stratified into median income grp**
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14. **AF by state and living location**
15. **AF by state and median income grp**

***Scatter plots***

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