CHS INDIVIDUAL

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| **Variable** | **Variable Name** | **Description** |
| Subject ID | sid | Unique participant identifier |
| Town Name | townname | Name of city where child’s residence is located |
| Sex | male | Binary indicator for sex   * 0 = Female * 1 = Male |
| Race | race | Multi-category variable for self-reported race   * A = Asian * B = Black * W = White * M = Mixed * O = Other * D = Did not respond |
| Hispanic | hispanic | Binary indicator for self-reported Hispanic ethnicity:   * 0 = Non-Hispanic * 1 = Hispanic |
| Age | agepft | Age of child at lung function testing (years) |
| Height | height | Height of child (cm) |
| Weight | weight | Weight of child (lbs) |
| BMI | bmi | Body mass index (kg/m^2) |
| Asthma | asthma | Binary indicator for physician diagnosis of asthma |
| Active Asthma | active\_asthma | Binary indicator for asthma activity in past 12 months |
| Father’s Asthma | father\_asthma | Binary indicator for whether father has history of asthma |
| Mother’s Asthma | mother\_asthma | Binary indicator for whether mother has history of asthma |
| Wheeze | wheeze | Binary indicator for child’s wheezing status |
| Hay Fever | hayfever | Binary indicator for child’s hay fever status |
| Allergy | allergy | Binary indicator for child’s allergy status |
| Parental Education | educ\_parent | Multi-category variable for parental education   * 1 = < 12th Grade * 2 = Grade 12 * 3 = Some post high-school * 4 = 4 years of college * 5 = Some post-graduate |
| Second Hand Smoke | smoke | Binary indicator for exposure of child to second hand smoke at home |
| Pets | pets | Binary indicator for presence of any pets in the residence |
| Gas Stove | gasstove | Binary indicator for presence of gas stove in the residence |
| FEV | fev | Forced expiratory volume in 1 second (ml) |
| FVC | fvc | Forced vital capacity (ml) |
| MMEF | mmef | Maximal mid-expiratory flow (ml/sec) |

CHS REGIONAL

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| **Variable** | **Variable Name** | **Description** |
| Town Name | townname | Name of city where child’s residence is located |
| PM2.5 mass | pm25\_mass | Annual average concentration of total particulate matter air pollution with aerodynamic diameter less than 2.5 um by community (units ug/m3) |
| PM2.5 SO4 | pm25\_so4 | Annual average concentration of sulfate (SO4) particulate matter air pollution with aerodynamic diameter less than 2.5 um by community (units ug/m3) |
| PM2.5 NO3 | pm25\_no3 | Annual average concentration of nitrate (NO3) particulate matter air pollution with aerodynamic diameter less than 2.5 um by community (units ug/m3) |
| PM2.5 NH4 | pm25\_nh4 | Annual average concentration of ammonium (NH4) particulate matter air pollution with aerodynamic diameter less than 2.5 um by community (units ug/m3) |
| PM2.5 OC | pm25\_oc | Annual average concentration of organic carbon (OC) particulate matter air pollution with aerodynamic diameter less than 2.5 um by community (units ug/m3) |
| PM2.5 EC | pm25\_ec | Annual average concentration of elemental carbon (EC) particulate matter air pollution with aerodynamic diameter less than 2.5 um by community (units ug/m3) |
| PM2.5 OM | pm25\_om | Annual average concentration of organic matter (OM) particulate matter air pollution with aerodynamic diameter less than 2.5 um by community (units ug/m3) |
| PM10 OC | pm10\_oc | Annual average concentration of organic carbon (OC) particulate matter air pollution with aerodynamic diameter less than 10 um by community (units ug/m3) |
| PM10 EC | pm10\_ec | Annual average concentration of elemental carbon (EC) particulate matter air pollution with aerodynamic diameter less than 10 um by community (units ug/m3) |
| PM10 TC | pm10\_tc | Annual average concentration of total carbon (TC) particulate matter air pollution with aerodynamic diameter less than 10 um by community (units ug/m3) |
| Formic acid | formic | Annual average concentration of formic acid by community (units ug/m3) |
| Acetic acid | acetic | Annual average concentration of acetic acid by community (units ug/m3) |
| Hydrochloric acid | hcl | Annual average concentration of hydrochloric acid by community (units ug/m3) |
| Nitric acid | hno3 | Annual average concentration of nitric acid by community (units ug/m3) |
| O3 maximum | o3\_max | Annual average of the daily maximum concentration of ozone (O3) by community (units parts per billion, ppb) |
| O3 8-hour avg | o3106 | Annual average of the daytime 8-hour average concentration of ozone (O3) by community (units ppb) |
| O3 24-hour avg | fev | Annual average of the 24-hour average concentration of ozone (O3) by community (units ppb) |
| NO2 | no2 | Annual average concentration of nitrogen dioxide (NO2) by community (units ppb) |
| PM10 | pm10 | Annual average concentration of total particulate matter air pollution with aerodynamic diameter less than 10 um by community (units ug/m3) |
| NO | no\_24hr | Annual average of the 24-hour average concentrations of nitrogen oxide (NO) by community (units ppb) |
| PM2.5 federal reference | pm2\_5\_fr | Annual average concentration of total particulate matter air pollution with aerodynamic diameter less than 2.5 um by community measured at a nationally run federal reference instrument (EPA) |
| Inorganic acid | iacid | Annual average concentration of inorganic acids by community (units ug/m3) |
| Organic acid | oacid | Annual average concentration of organic acids by community (units ug/m3) |
| Total acids | total\_acids | Annual average concentration of total inorganic and organic acids by community (units ug/m3) |
| Longitude | lon | Longitude of the air pollution station in each community |
| Latitude | lat | Latitude of the air pollution station in each community |