

**Supplemental Material**  
**Design, Methods and Population for a Study of PFOA Health Effects among**  
**Highly Exposed Mid-Ohio Valley Community Residents and Workers**

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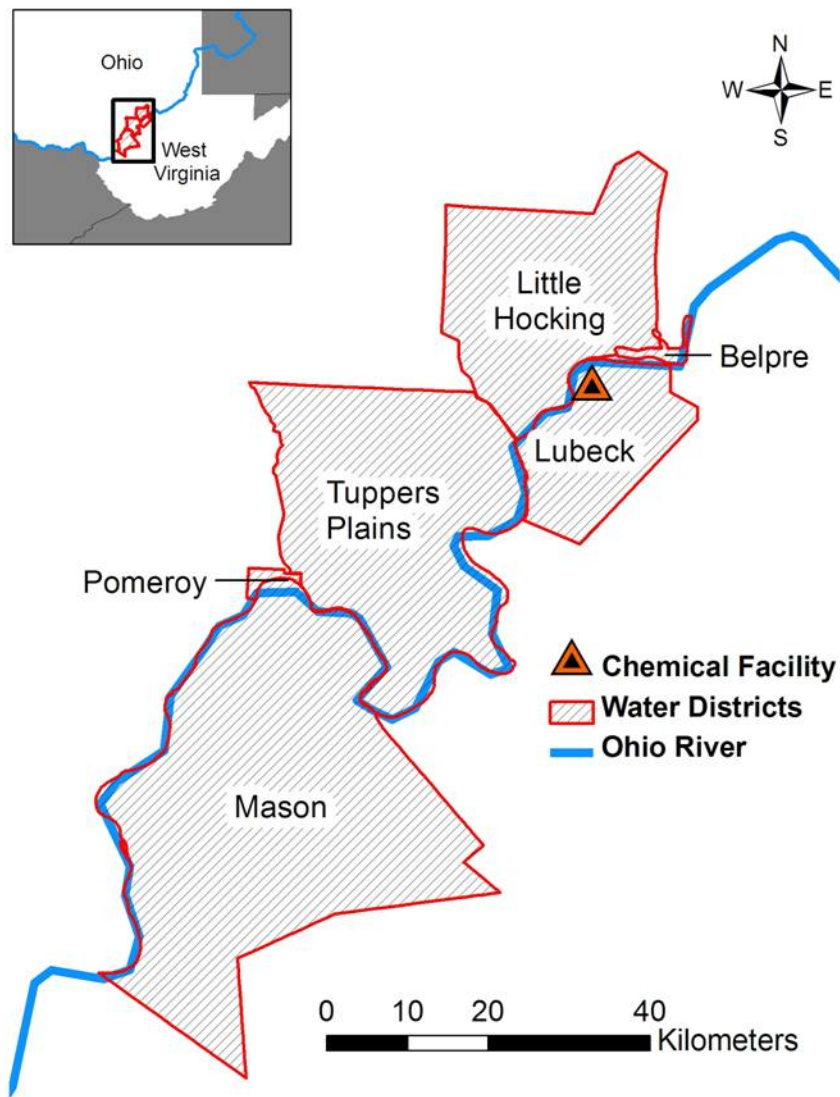
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**Supplemental Figure S1: Map of study area**



**Supplemental Table S1: Medical conditions for which medical records review was conducted.**

| Condition/Category  | Exclusions (medical records not reviewed) |
|---|---|
| Heart disease   |   |
| Cerebrovascular accident  |   |
| Diabetes  |   |
| Chronic Obstructive Pulmonary Disease (Emphysema or Chronic bronchitis) |   |
| Asthma  | No current prescription medication        |
| Thyroid disease   | No current prescription medication        |
| Kidney disease  | Kidney stones                             |
| Liver disease   |   |
| Rheumatoid arthritis  | No current prescription medication        |
| Autoimmune disease  |   |
| Inflammatory bowel disease (Ulcerative colitis or Crohn's)              |   |
| Neurological disease  |   |
| Cancer  | Non-melanoma skin cancer                  |

**Supplemental Table S2: Parameter values from models of the association between the natural log of yearly modeled serum PFOA concentration estimates and personal characteristics\***

|                              |                |
|------------------------------|----------------|
| <b>QIC of full model</b>     | 1420627.603    |
| <b>Parameter estimates:</b>  |                |
| Birth year <1920             | <b>0.5464</b>  |
| Birth year 1920-1929         | <b>0.3149</b>  |
| Birth year 1930-1939         | <b>0.2719</b>  |
| Birth year 1940-1949         | <b>0.1663</b>  |
| Birth year 1950-1959         | ref            |
| Birth year 1960-1969         | <b>-0.1864</b> |
| Birth year 1970-1979         | <b>-0.2487</b> |
| Birth year 1980+             | <b>-0.2862</b> |
| Current smoking              | <b>-0.0185</b> |
| Former smoking               | -0.0047        |
| Current alcohol use          | 0.0023         |
| Former alcohol use           | <b>0.0193</b>  |
| Female gender                | <b>0.0201</b>  |
| Non-white race               | <b>-0.1322</b> |
| BMI underweight              | 0.0452         |
| BMI overweight               | <b>-0.0754</b> |
| BMI obese                    | <b>-0.1553</b> |
| In worker cohort             | <b>1.0782</b>  |
| Education: <high school      | <b>-0.0662</b> |
| Education: high school       | <b>0.0864</b>  |
| Education: some college      | <b>0.147</b>   |
| Education: Bachelor degree + | ref            |
| Income: <\$10,000            | <b>-0.1339</b> |
| Income: \$10,001-\$20,000    | <b>-0.0989</b> |
| Income: \$20,001-\$30,000    | -0.019         |
| Income: \$30,001-\$40,000    | <b>0.0552</b>  |
| Income: \$40,001-\$50,000    | <b>0.0576</b>  |
| Income: \$50,001-\$60,000    | -0.0065        |
| Income: \$60,001-\$70,000    | 0.0111         |
| Income: \$70,000+            | 0              |

\* Models modeled the natural log of yearly serum PFOA concentrations as a linear function of gender; race; 10-year birth year category; time-varying smoking status (none,current,former) and alcohol consumption (none,current/former); and non-time-varying household income and years of education (socioeconomic status markers), body mass index category, and plant worker status; controlling for time trends using cubic splines with knots at 1961, 1966, 1971, 1976, 1981, 1986, 1991, 1996, 2001, and 2006; and accounting for correlations between repeated measures on the same subject using a 45-dependent correlation structure (mdep(45)). These analyses were conducted using SAS PROC GENMOD. Bold type indicates p<0.05.