Environ Health Perspect

DOI: 10.1289/EHP8657

Note to readers with disabilities: *EHP* strives to ensure that all journal content is accessible to all readers. However, some figures and Supplemental Material published in *EHP* articles may not conform to <u>508 standards</u> due to the complexity of the information being presented. If you need assistance accessing journal content, please contact <u>ehp508@niehs.nih.gov</u>. Our staff will work with you to assess and meet your accessibility needs within 3 working days.

Supplemental Material

Estimating the Effects of Soil Remediation on Children's Blood Lead near a Former Lead Smelter in Omaha, Nebraska, USA

Dongni Ye, James S. Brown, David M. Umbach, John Adams, William Thayer, Mark H. Follansbee, and Ellen F. Kirrane

Table of Contents

Table S1. Residential soil lead levels (SLLs) at properties included in the focus area (N=28,422), greater Omaha Nebraska (1999-2016).

Table S2. Number of blood lead measurements comparing pre- and post-remediation capillary and venous blood lead levels (BLLs) among children in the remediation group, and pre-remediation BLLs capillary and venous BLLs in the comparison group.

Table S3. Data corresponding to Figure 3.

Table S4. Data corresponding to Figure 4.

Table S5. Associations between categorical or continuous (log2-transformed) maximum soil lead levels (SLL) of yard quadrants and the drip zone^a and children's EBLL₅; associations estimated separately using pre-remediation (N=115,405) and post-remediation (N=14,701) capillary BLLs of children residing at properties within the study area where SLL was measured, greater Omaha Nebraska, 1999-2016.

Table S6. Associations between categorical or continuous (log2-transformed) average soil lead level (SLL) and children's EBLL₅, stratified by remediation status, i.e., associations estimated separately using pre-remediation (n=75,041) and post-remediation capillary blood lead levels (BLLs) (14,451) and restricted to the focus area^a, greater Omaha Nebraska, 1999-2016.

Table S7. Comparison of main results in Table 3 and 6 to results from sensitivity analyses using alternative specification for year and season.

Table S8. The association of soil lead level (SLL) with elevated blood lead level (BLL) $\geq 5 \ \mu g/dL$: parameter estimates for the model of Table 3 with or without adjustment for race.

Table S9. Percentage of blood lead levels greater than 10 μ g/dL (% EBLL) by children's characteristics for 9,050 capillary BLLs among 3,135 children in the remediation group (i.e., children who had both preand post-remediation blood lead measurements), 70,532 capillary BLLs from 38,667 children in the comparison group (i.e., children who had only pre-remediation blood lead measurements), and 9910 capillary BLL among 5774 children in the post-only group. All children reside within the focus area, greater Omaha Nebraska (1999-2016).

Table S10. Percentage of blood lead levels (BLLs) greater than 5 or equal to µg/dL by children's characteristics for 1255 venous BLLs among 551 children in the remediation group (i.e., children who had both pre- and post-remediation blood lead measurements), 12685 venous BLLs among 9211 children in the comparison group (i.e., children who had only pre-remediation blood lead measurements), and 960 venous BLL among 593 children in the post-only group. All children reside within the focus area, greater Omaha Nebraska (1999-2016).

Table S11. Estimated Odds Ratios (95% Confidence Interval) for elevated blood lead levels (EBLLs) using capillary (EBLL₁₀) and venous (EBLL₅) measurements separately from children in the remediation group within the focus area, Omaha Nebraska (1999-2016).

Table S12. Percentage of elevated blood lead levels (EBLLs) by children's characteristics in the comparison group (i.e., children who had only pre-remediation blood lead measurements) before and after 6/29/2009^a. All children reside within the focus area^b, greater Omaha Nebraska (1999-2016).

Table S13. Estimated Interaction Odds Ratios (95% Confidence Intervals) for elevated blood lead levels (EBLLs) using capillary (EBLL₁₀) and venous (EBLL₅) measurements separately for children withing the focus area, Omaha, Nebraska (1999-2016).

Table S14. The effect of remediation (pre- versus post comparison): parameter estimates for the model of Table 6 with or without adjustment for race.

Table S15. Time by intervention interaction analysis: parameter estimates for the model of Table 8 with or without adjustment for race Controlling for Race.

Figure S1. Monthly average percentage of capillary blood lead measurements that equal or exceed 5 μ g/dL (%EBLL₅) (averaged over years) for children in the remediation group within in the focus area (blue, dotted and dashed), in comparison group within in the focus area (red, dotted), and in the comparison group outside the focus area (green, solid) in Omaha NE, 1999-2016.