Using CBPR to Explore Backyard Gardening Practices and Soil Lead Concentrations in Urban Neighborhoods

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What Is the Purpose of This Study?

• The Growing Healthy Soil for Healthy Communities project seeks to explore the relationship between urban backyard gardening and lead exposure risk in children and families.

• The project partners are committed to a long-term goal of promoting safe backyard gardening as a transformational community development strategy.

What Is the Problem?

• Lead exposure is a serious health threat for children.

• Soil is an important exposure pathway, primarily because hand-to-mouth activity results in swallowing lead contaminated soil, and also because small particles of contaminated soil are inhaled.

• Urban agriculture is increasing.

• Potential environmental health risks associated residential gardening may not be well-known to community residents.

What Are the Findings?

• Concern about lead exposure from backyard gardening varied between adults in two urban neighborhoods.

• Children under age 6 years old were actively involved in backyard gardening.

• Certain areas of the yard (e.g., dripline) had higher levels of lead concentration than other areas (e.g., lawn).

• Native soil had higher lead concentration than soil and compost purchased from stores.

Who Should Care Most?

• Urban backyard gardeners may consider testing soil before gardening to minimize lead exposure risk for children.

• Community-based organizations may consider implementing programs that include safe gardening education, providing access to soil testing resources and encouraging neighbors’ engagement in policy discussions related to urban agriculture.

Recommendations for Action

• Soil test reports should begin to include specific information regarding minimizing contaminant exposure.

• Testing of landscape interventions that will reduce soil lead concentration in urban neighborhoods should be undertaken.