Blood Lead Surveillance Data

Harley T. Davis

Division of Surveillance
Office of Public Health Statistics and Information Services (PHSIS)
Outline

- Introduction
- Environmental Public Health Tracking program
- Data availability and examples
- Limitations
- Data request information
Introduction

• Blood lead tests are a reportable condition in SC based on SC State Law §44-29-10

• All tests are reportable, regardless of concentration
  • For children, screening is recommended, though certain populations require blood lead testing

• The South Carolina Environmental Public Health Tracking program (EPHT) in PHSIS is responsible for blood lead surveillance data at DHEC
EPHT

- Centers for Disease Control and Prevention (CDC) funded grant program

- Tasked with tracking important environmental and public health data
  - Air and water quality
  - Birth defects
  - Asthma hospitalizations
  - Childhood blood lead levels

- SC has had a program since 2009
EPHT and blood lead surveillance

- EPHT helped develop the web application for entering paper records
  - Electronic lab records also received

- EPHT data manager monitors data quality to reduce duplicates and ensure the data we have are valid for programs that provide follow-up
  - Also coordinates geocoding of test records

- Since all blood lead tests are reportable, EPHT also receives adult blood lead records (>16 years of age; 12% of test records in 2015)
Data availability

• Data available from 2010-present

• Data through 2015 geocoded (county)
  • Other geographic levels may be possible

• Variables include test date, age, test value, test type, race, ethnicity, and gender
  • Individuals with multiple tests can be linked

• Approximately 15,000-20,000 test records are received annually
  • Large data set to work with
Data examples

Figure 1. Number of blood lead tests and percent (%) of elevated (≥ 5 µg/dL) blood lead levels (EBLL) in children for 2010-2014.*

*From poster presented at APHA National Meeting, 2016

Figure 2. Percent EBLL by US Census 2010 block group in children for 2010-2014.*

*From poster presented at James Clyburn Health Disparities Lecture, 2016
Limitations

• Screening of children is not universal and it is thought that there is underreporting
  • Health Alerts, Notification (HAN) reminder that all tests are reportable, not just elevated (July 2016)
  • Also reminded providers of populations that require testing

• Missing information
  • Race and ethnicity are missing for >50% of records
  • Limited address information affects ability to accurately geocode
Data request information

• Please contact Harley Davis directly to request data:
  • davisph@dhec.sc.gov
  • (803) 898-3629

• We can discuss your proposed research objectives and provision of a data set

• MAVEN/SCION

• SC EPHT program (http://www.scdhec.gov/epht)
  • Some data are available on the SC EPHT web portal