



South Carolina Department of Health and Environmental Control

Blood Lead Surveillance Data

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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

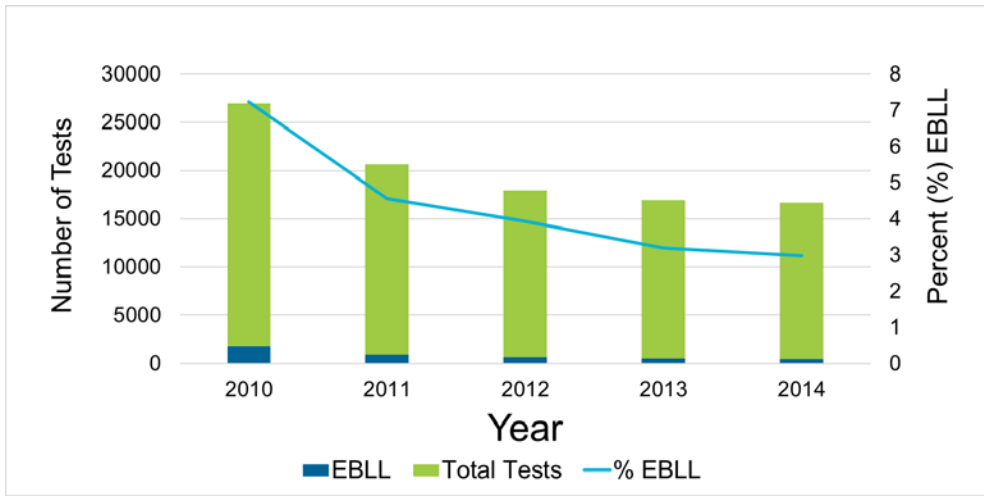
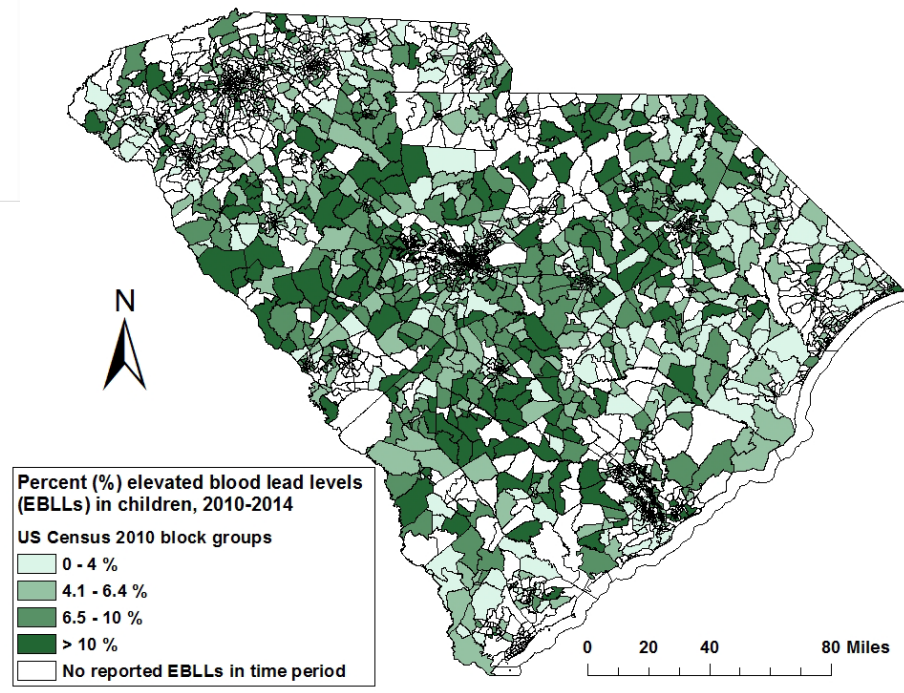


Figure 1. Number of blood lead tests and percent (%) of elevated ($\geq 5 \mu\text{g/dL}$) blood lead levels (EBLL) in children for 2010-2014.*

*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