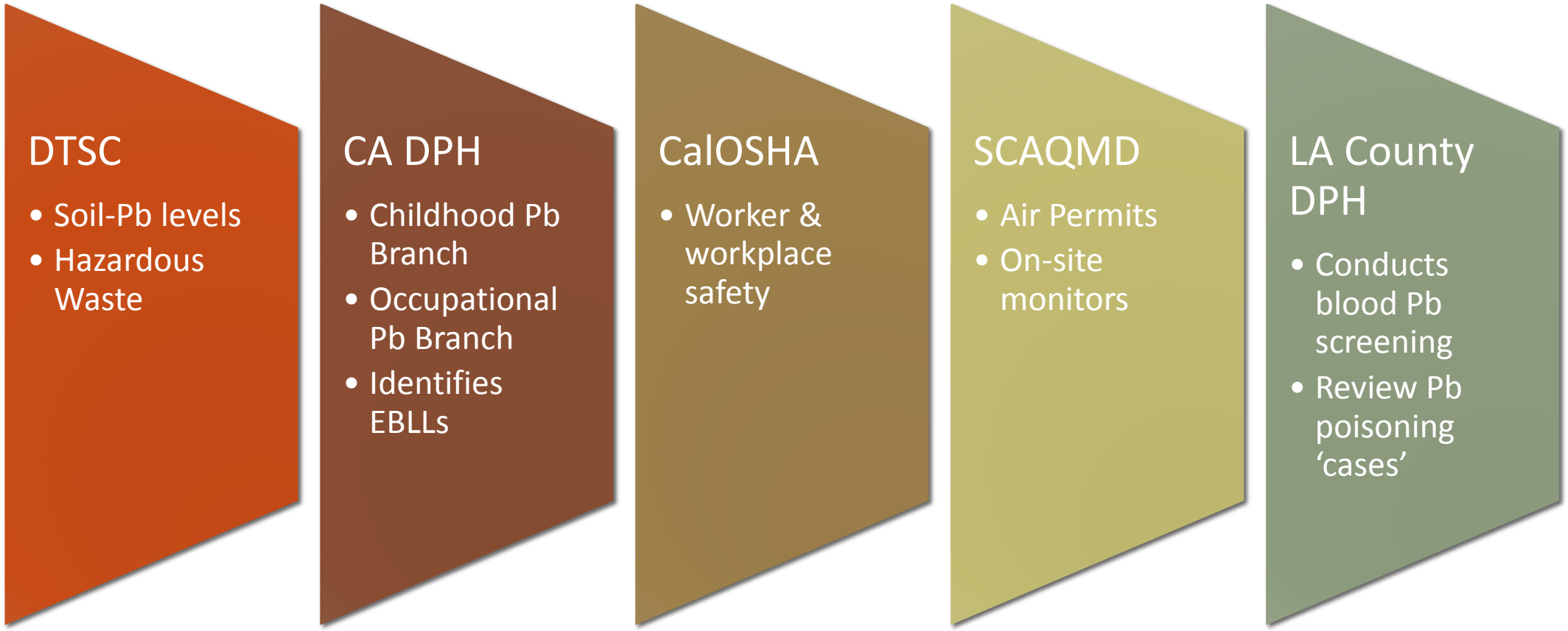
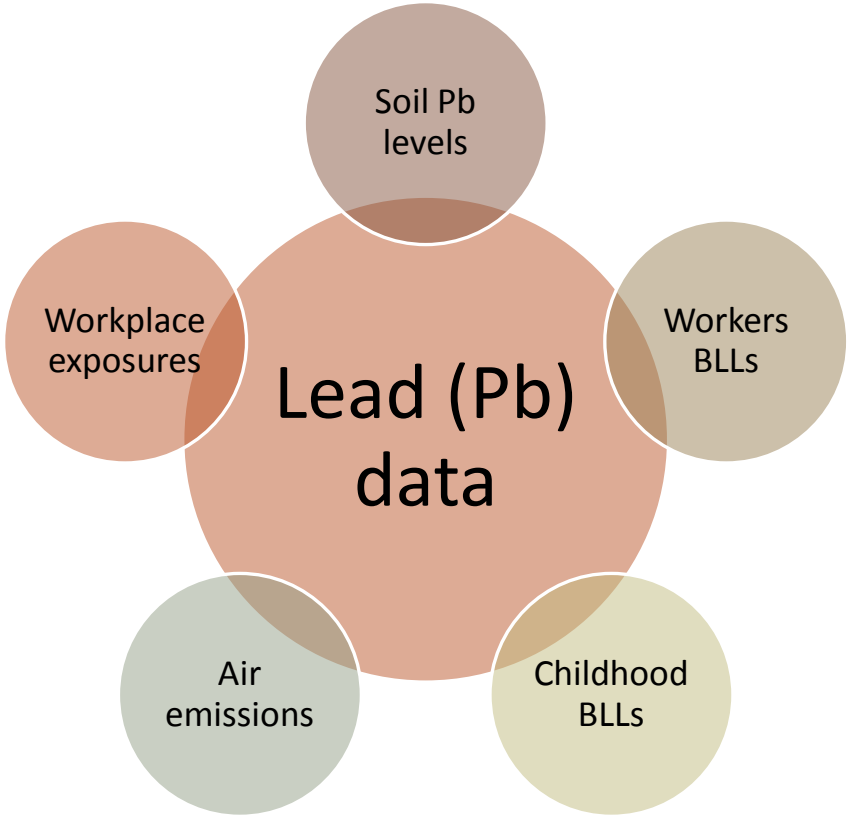
Moving Beyond ‘Silos’: Using Data & Collaboration to Protect Public Health

Jill Johnston, PhD & Andrea Hricko, MPH
University of Southern California

Numerous Agencies Regulate Lead

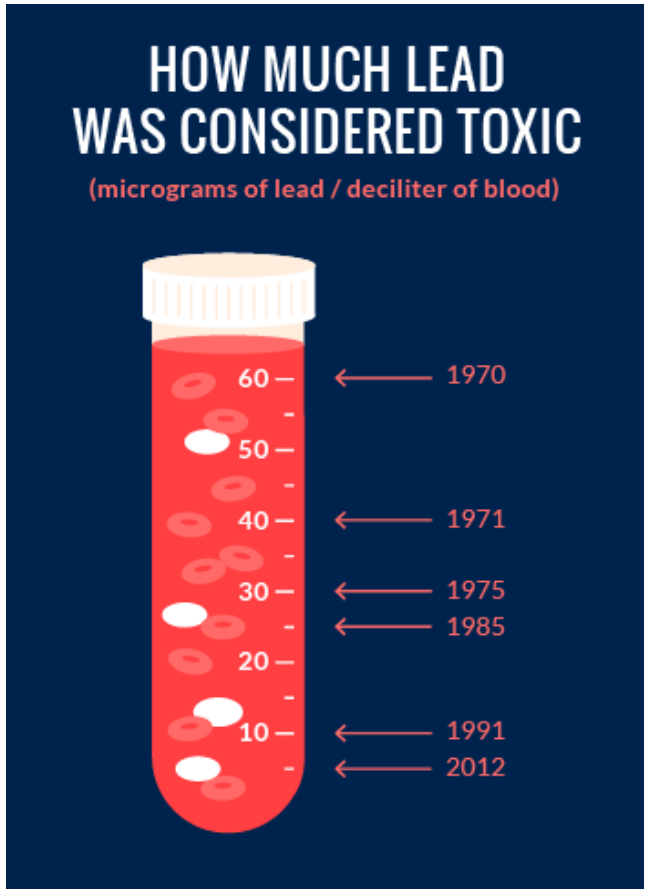


Information Collected



- Systematic collection of data
- Not used to public health surveillance
  - That is, the analysis and interpretation of **health**-related data needed for the planning, implementation, and evaluation of **lead poisoning prevention**
  - Case management is not surveillance
- **Minimal sharing** of this information across agencies
  - Even less with the public
- Synthesis of this information could help in the identification of “bad actors” in the community

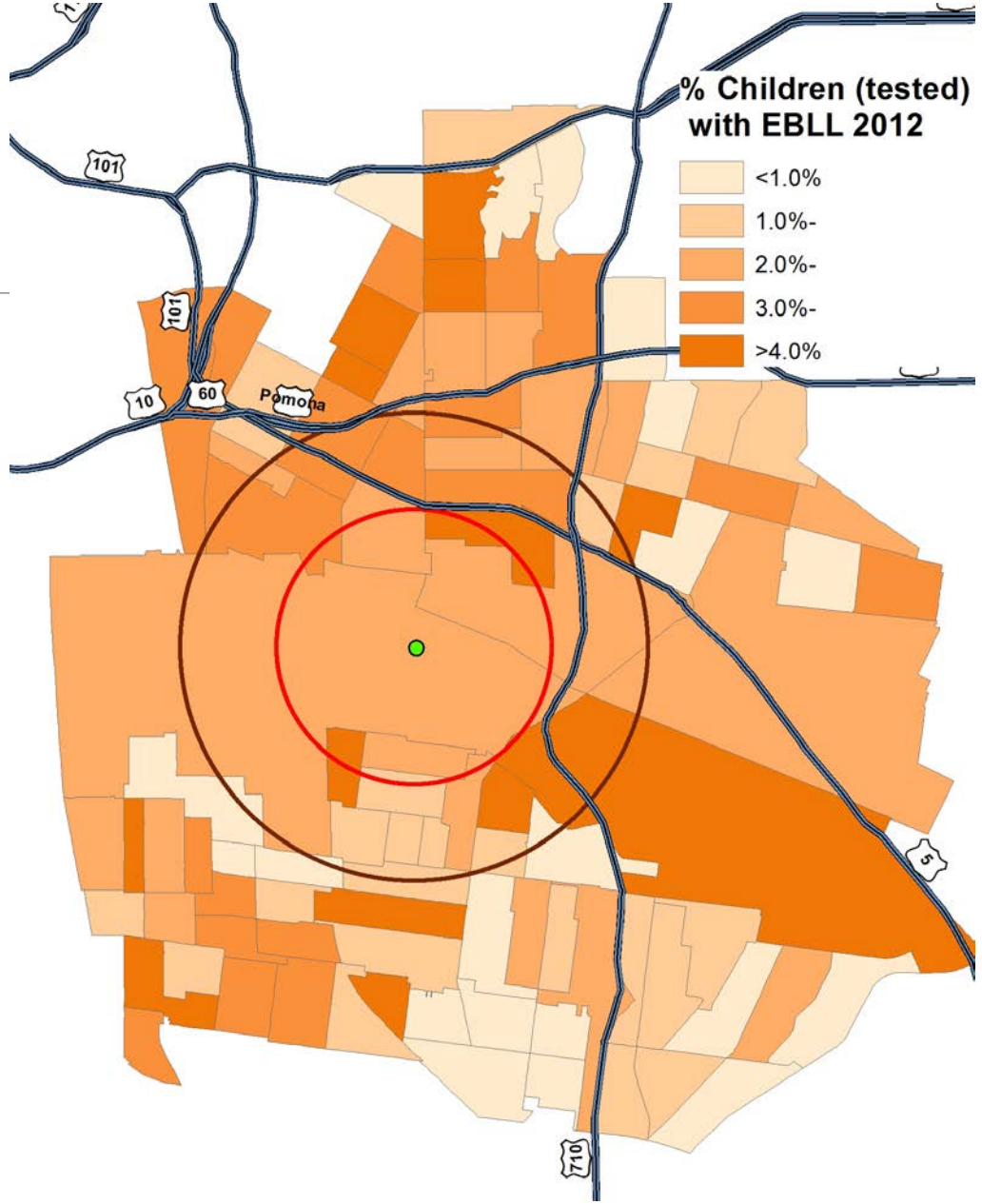
Blood Lead data



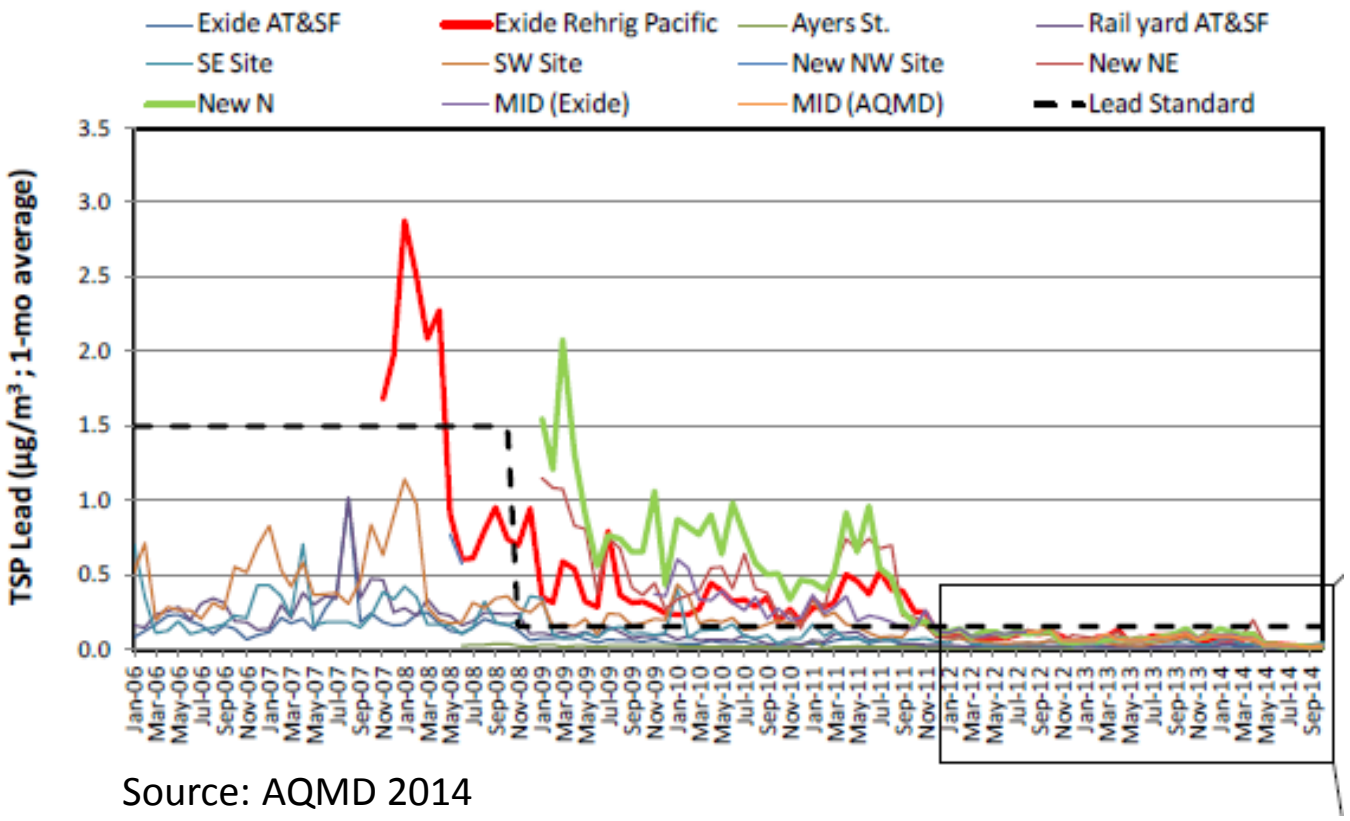
- Case definition out-of-line with current scientific evidence & CDC
  - State has been using =>15ug/dL as definition of a “case”
  - This will change to => 10ug/dL later this year
  - CDC uses => 5 ug/dL
- Outdated reporting system
  - Labs should be required to report with a 1 ug/dL limit of quantification (that is, use state of the art technology)
- Data does not appear to be used for surveillance
  - Not routinely geocoded
  - Not shared
- Only children on public programs are required to be tested
  - May miss at-risk children

Blood Lead Data

- Important to visualize the information to communicate to broad audience
- Use of a binary variable => more difficult to recognize patterns
- Only represents one year of data
- Only a few census tracts in 1.7 mi area
  - More difficult to identify patterns



Use of Blood Lead Data



Source: AQMD 2014

- Recommendations
  - Increase the years in the CDPH analysis
    - 2012 may not be “worst case”
  - Use 3 ug/dL as the cutpoint for comparison
  - Consider wind direction & risk isopleths
  - Restrict sample to children most at risk (<3 years old)
  - Need block-level resolution (too few census tracts in the 1.7 mile area)

Soil Lead Data is Important

- Due to limitations in blood data, the soil data should guide cleanup and testing efforts
  - Soil Pb levels are more likely than blood to follow a distance decay pattern
- To date, have not seen any spatially refined soil data from DTSC (or LA DPH)
- Recommendations
  - Provide the data and a spatially-refined analysis of the testing results
  - Use this information to identify priority cleanup areas
  - Need investigation into the relationship between soil Pb and indoor dust Pb levels and whether cleanup impacts the indoor environment

Prevention is Key 1: Collaboration

- Need a Statewide Lead Task Force to develop methods for surveillance of Pb exposures in CA that includes environmental, public health and occupational agencies at the state and local level
- Review best practices in other states
  - E.g., Some states require all children to have blood lead tests
- Improve methods to utilize and share information across departments

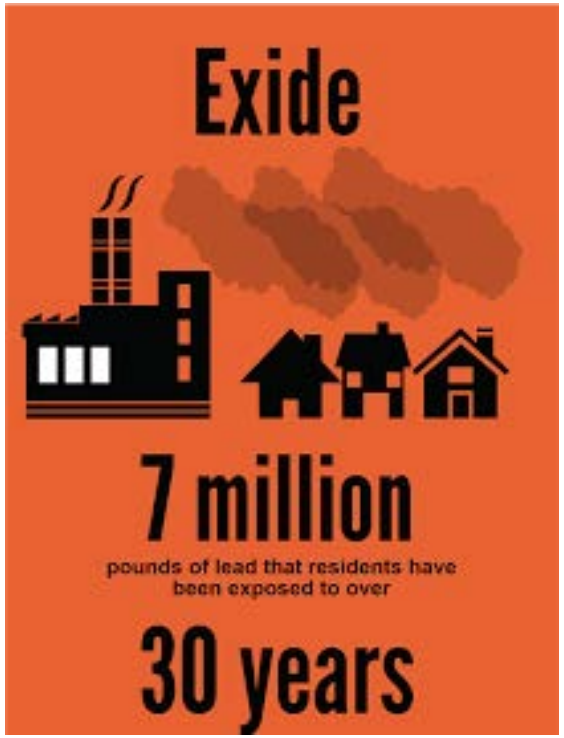
Prevention is Key 2: Workers

- Worker (and employers) BLLs should be used to identify potential community 'hot spots' for lead exposure
  - All labs should be reporting names/addresses of employers of workers' blood lead data to the CDPH
  - CDPH should inform county health departments about problem companies and ensure that county checks on all children of workers with EBLLs

Prevention is Key 3: Protective Remediation

- Leverage resources to address multiple exposure pathways to lead in this community
- Assess indoor exposures and dust
  - Need for DTSC to ensure that cleanups are not impacting house interiors
- Assure cleanup workers are not bringing lead dust into their cars or homes

Thank you



- Jill Johnston, PhD
  Assistant Professor of Preventive Medicine
  Division of Environmental Health
  Keck School of Medicine
  University of Southern California
  jillj@usc.edu
  323-442-1099

- Andrea Hricko
  Professor of Preventive Medicine
  Division of Environmental Health
  Keck School of Medicine
  University of Southern California
  ahricko@usc.edu
  323-442-3077