Short History of Lead Poisoning in St. Louis, MO:
Partnering to Shift into Primary Prevention

William L. Kincaid, MD, MPH
Director
Department of Health
City of St. Louis
Early St. Louis Concerns

- 1946 - Two Children die from lead poisoning after exposure to lead fumes and leaded ashes from the burning of lead-acid battery casings for fuel in hand-fired coal heating stoves.
  - Public Health Lab offers blood lead analysis and test kits
- 1948 - After education alone is ineffective, Legislation is enacted to regulate the disposal of lead-acid battery casings.
- Mid 1950s - *Southern Medical Journal* published study of the “Seasonal Incidence of Lead Poisoning in Children in St. Louis”.
  - Illustrated clear seasonal pattern in reported cases.
  - Tragically, and by today’s standards almost unbelievably, illustrated a clear seasonal pattern in *DEATHS* in children from Lead Poisoning.
St. Louis Reported Cases
Nov. 1950 - Oct. 1954
(total cases - 246)
St. Louis Child Lead Poisoning Deaths
Nov. 1950 Oct. 1954
(Total Deaths - 12)
“The Public demand for enforcement of housing laws never seems to be great enough to result in sufficient appropriations to do an adequate job in the face of the financial difficulty of most older Cities.”

--C.M. Copley, Jr. - 1955

Commentary on Southern Medical Journal article on seasonal incidence of lead poisoning in St. Louis, Missouri.
“Lead Poisoning is a very serious illness, and presents a twofold problem, one to emphasize the need for early diagnosis and treatment, and the other the matter of prevention.”

--Dr. Donald L. Thurston, M. D.

Commentary on Southern Medical Journal article on seasonal incidence of lead poisoning in St. Louis, Missouri.
Growth & Development (1)

• Jul - Aug 1970 - Pilot Mass Screening Program
  ✔ 89 Children tested in high risk areas of the City.
  ✔ 34 (38.2%) with blood lead levels of 50 µg/dl or greater.
  ✔ 19 of 32 (59.4%) required hospitalization.
  ✔ Projected that 30,000 Children age 1 to 6 were living in high risk areas of the City

• Sept 1970 - Lead Poisoning Control Service Formed
  ✔ Unexpended funds identified in other Division of Health programs
  ✔ The Lead Poisoning Control Service established as a section in the Bureau of Communicable and Reportable Disease
  ✔ 10 full-time positions created
  ✔ Lead Inspections assigned to the Community Sanitation & Vector Control Section of Environmental Health Services
Scientific and Community Action begin to galvanize a Political Will

- **September 1970**
  - Several community groups involved in lead Poisoning prevention advocacy united to form the *People’s Coalition Against Lead Poisoning*.
  - Coalition became a strong community voice demanding more aggressive efforts directed toward the PREVENTION of lead poisoning in children.

- **December 1970**
  - Student demonstrations at local universities in December of 1970 escalated media coverage and increased community awareness.

- **January 1971**
  - Medical Community urged to be aware of the childhood lead poisoning problem in St. Louis by:
    - *Deans of both medical schools*
    - *Director of the Hospital Association*
    - *Health Commissioner*
  - City Fathers urged to appropriate resources to begin addressing the problem

- **January 1971**
  - Blood lead testing available free upon request in all four Municipal Health Centers operated by the Division of Health.
  - Blood lead test kits & laboratory analysis offered free to health care providers in the city.
Scientific and Community Action begin to galvanize a Political Will (2)

- May 1, 1971
  - Lead Poisoning Control Service funded as a specific program in the City of St. Louis Fiscal ‘71-'72 budget.
- May 22, 1971
  - “Get The Lead Out Conference”
  - Co-Sponsored by the University of Missouri Extension Division
  - St. Louis University School of Medicine
  - Action-oriented workshops
  - Open to entire community
  - Published workshop recommendations in a conference report
- September 1971 - Mobile Screening Pilot
  - One month pilot of mobile screening in high risk areas undertaken in Sept. ‘71.
  - Pilot program identified a high rate of children with lead levels of 40 µg/dl or greater.
  - Mobile screening expanded to 5 to 6 months spring-summer-fall months every year thereafter from 1972 through 1995.
Growth & Development (2)

- Oct 1975 - Moved to renovated offices in Health Division Building at 634 N. Grand.
- Oct 1977 - Funding under the Public Service Employment Act allowed hiring of 17 laboratory and outreach employees for systematic door-to-door screening.
  ✓ Greater St. Louis Lead Advisory Council formed.
- Jan 1978 - Community Development Block Grant Funding for Detox and Inspection.
- Apr 1978 - CDC Statement on Childhood Lead Poisoning revised.
- 1979 - 910 cases referred to housing court for prosecution.
- 1980 - Funding from all sources in excess of $1,000,000.
Growth & Development (3)

- 1980 - 1,431 cases referred to housing court for prosecution.
- 1981 - Substantial cuts in City of St. Louis funding for Lead Poisoning Prevention
- 1982 - MCH Block Grant pass-through from State of Missouri of $45,000.
- 1983 - All categorical funds for childhood lead poisoning discontinued. MCH Block Grant pass through increased to $100,000, a significant reduction from the $500,000+ amount previously received directly.
- 1984 - Phase out of CDA Block Grant
• 1985 Loss of all CDA Block Grant funding.
• Jan 1985 - Revised CDC Statement on Preventing Lead Poisoning in Young Children released.
• Jul 1985 - Lead Clinic transferred to Regional Medical Center at Homer G. Phillips.
• Apr 1987 - Lead Clinic transferred back into Health Division at 634 N. Grand.
• 1989 - CDC begins to explore revising 1985 statement and re-implementation of categorical funding for childhood lead poisoning prevention.
• Feb 1991 - CDC issues a “Strategic Plan for the Elimination of Childhood Lead Poisoning”.
The 1990s and early 2000s

- Lead testing becomes a “main line” medical care responsibility.
- Case Management of children with childhood lead poisoning is covered by Medicaid.
- Managed Care arrives in St. Louis and Missouri
- Regional Hospital closes
- ConnectCare forms to salvage the old “city clinics”
- The Regional Health Commission comes into existence to help organize the “safety net” providers
- On a national level HUD and EPA are strengthened by better laws and increased funding.
Lead Canaries: The Tragic Tradition of Childhood Lead Poisoning in St. Louis
St. Louis Lead Prevention Coalition, 2003

• Prevent children from becoming lead poisoned

• Focus on housing

• Abatement—rather than interim controls—is necessary to achieve primary prevention in St. Louis

• An effective primary prevention system must rely largely on public resources to remove hazards from low- and moderate-income housing
Lead Safe St. Louis
A Comprehensive Action Plan for the Eradication of Childhood Lead Poisoning in St. Louis By 2010
Francis G. Slay
Mayor, City of St. Louis
November 21, 2003

From Preliminary Recommendations By:
Ruth Ann Norton
Executive Director
Coalition to End Childhood Lead Poisoning
Lead Safe St. Louis Logic Model

Targeted Media Campaign

Increased Public Awareness of Lead Issue

More Requests for Home Inspections

More Abatement BEFORE a Child is Poisoned

Decreased Childhood Lead Poisoning

Primary Prevention

Community Partners

Physicians
Managed Care Plans
Day Care Association
Community Agencies etc.
Lead Safe St. Louis Partners

• Community Organizations & Agencies
  ✓ St. Louis Lead Prevention Coalition
  ✓ Catholic Charities
  ✓ Jewish Community Relations Council

• Medical Community
  ✓ Managed Care Plans
  ✓ St. Louis Pediatric Society

• St. Louis City Agencies
  ✓ Department of Health
  ✓ Department of Public Safety, Building Division
  ✓ Community Development Agency

• Abatement Contractors

• Day Care Association

• Real Estate Brokers and Home Rental Agencies

• Funding Agencies
  ✓ Housing and Urban Development (HUD)
  ✓ Missouri Foundation for Health (MFH)
  ✓ Environmental Protection Agency (EPA)
U.S. Housing Stock: 98 Million Housing Units
38% will need ongoing surveillance

- 60,000,000 Lead Free
- 13,000,000 Some Lead Hazards
- 21,000,000 Priority Hazards
- 3,600,000 Homes with Children with EBL Levels

3.6 M / 98 M is 3.5% of units
City of St. Louis Housing Units by Age

94% of City Housing Units will need Ongoing Surveillance

Total Units: 147,076
- Pre 1950 Units: 95,091
- Pre 1978 Units: 42,909
- Post 1978 Lead Free Units: 9,076
Lead Safe St. Louis

Targeted Housing Units

Lead Based Paint

- Total Housing Units Today: 147,000
- Total Housing Units Pre-1978: 138,000
- Total Housing Units Pre-1950: 95,000
- Total Housing Units with Children Under 6: 14,500

14,500 / 147,000 or about 10% of the St. Louis City Housing Units
Challenges

• Data Infrastructure: Changing public health and medical systems creates poor integration of data systems needed to manage a complex multi-system endeavor

• Lack of public awareness of new abatement capacity

• Mistrust of inspection process

• Increasing penetration to unlicensed day care centers

• Educating Realtors