
**THE COALITION TO END CHILDHOOD
LEAD POISONING IN DENVER**

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Strategic Plan 2007-2010

6th Draft (June 15, 2007)

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Coalition Steering and Advisory Committee Members

Steering Committee Members

Gene Hook, Denver Environmental Health
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Advisory Committee Members

Abdul Sese – Denver Housing and Neighborhood Development
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Mark Ward- Denver Housing Authority
Mateos Alvarez - MOP
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Mishelle Macias – Colorado Dept. of Public Health & Environment
Tom Kennedy- Neighborhood Inspection Services

Committee members participated in the planning process and acceptance of the plan means that each individual agrees with the overarching mission, vision, and goals. However, some differences of opinion in the area of specific objectives and actions are expected given the diverse composition of the Advisory Committee.

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I. Coalition Background and Progress

Lead poisoning is one of the top preventable environmental health concerns for children in the United States. In Denver, a city task force has met for a number of years to coordinate lead poisoning prevention activities. In 2006, Northeast Denver Housing Center, Denver Environmental Health, and Denver Health and Hospital Authority created a Steering Committee to initiate a formal strategic planning process to address the elimination of childhood lead poisoning in Denver. The Steering Committee (*i.e.*, individuals from Northeast Denver Housing Center, Denver Environmental Health, and Denver Health and Hospitals Authority) began the process by reviewing the work of other cities and related objectives from the recently completed Colorado State Strategic Plan. The Steering Committee formed an Advisory Committee by inviting stakeholder participation from a wide range of public, private, and non-profit entities that have an interest in, or could influence, lead poisoning prevention issues. Individuals agreed to work together to determine strategic priorities for eliminating childhood lead poisoning in Denver.

The charter of the Advisory Committee was four-fold:

- To understand the key issues affecting childhood lead poisoning in Denver;
- To have representatives from key groups provide their perspectives on each sector's potential contribution to a solution;
- To agree upon a process to determine how to eliminate childhood lead poisoning in Denver by 2010, resulting in the creation of a strategic plan; and
- To support the implementation of a coordinated strategy to eliminate lead poisoning, as documented in the strategic plan.

The Coalition's strategic planning process occurred in several phases. First, Steering Committee members collected existing data regarding childhood lead poisoning in Denver, including blood lead test results and housing stock information. These data were presented to the Advisory Committee, as was information on sources of lead exposure and potential health effects. The Advisory Committee and Steering Committee discussed the overall vision and goals for the Strategic Plan, and the group outlined realistic objectives and possible action steps to reach the goals. The Steering Committee sorted the information and ideas to produce a final plan for addressing this issue. The plan was presented to the Advisory Committee and each entity agreed to support the plan in keeping with their agency or organization's resources and mission.

II. Lead Data and Statistics

Lead poisoning is a serious community issue that hurts children's capacity to learn and thrive. Lead-poisoned children are likely to suffer from adverse affects on their intelligence and ability to learn, and are at an increased risk of displaying adverse behaviors. While we typically focus on its neurotoxic effects, lead is believed to affect nearly every organ system in the body. Lead-poisoned children may display decrements to their growth and hearing, as well as effects on their blood forming system, even at relatively low levels of exposure. Lead poisoning may result in coma and or death in extreme cases. Poor children, children of color, and those living in older housing are disproportionately affected by lead poisoning as reported by the Centers for Disease Control and Prevention (CDC).

Children are the population of highest concern for lead poisoning because their behaviors make them most at risk for exposure. Additionally, their physiology is developing and is therefore more susceptible to its effects. Lead interferes with the formation of connections between brain cells; these connections affect the brain's functioning. Recent data suggest that even low levels of lead impact children's intelligence (IQ), short-term memory, reading and mathematics ability, as well as reasoning skills. In addition, some studies suggest lead exposure may contribute to hyperactivity and increase a child's risk

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for antisocial and delinquent behavior. Thus, lead-exposed children may experience multiple risk factors that reduce their odds for success in the school environment, and that may reduce their future educational and vocational opportunities.

Currently, the CDC defines 10 µg/dL (micrograms per deciliter) as the federal level of concern for childhood blood lead. Levels equal to or greater than this are termed elevated blood lead (EBL) levels. The CDC has acknowledged, however, that recent data suggest there may be health effects below the current level of concern. They state there may be "...no 'safe' threshold" for lead in children's blood, and this "... highlights the importance of preventing childhood exposures to lead".¹

While the effects of low blood lead levels may not be easily measurable in an individual child, the data suggest that low-level blood lead exposures spread across a community can have population-level effects, increasing the number of children with less than average intelligence. In some cases, this may increase the numbers of children with special needs that require greater financial assistance and other resources.

For the period of 1996-2003, more than 700 children in Denver were reported to the State health department with elevated blood lead levels (i.e., ≥ 10 µg/dL).² The true number of Denver children with elevated blood lead levels, however, is unknown because blood lead testing is not a standard practice by most health care providers. Testing by Denver Health and Hospitals Authority showed 14-17 percent of young children served by their clinics have blood lead levels of 5 µg/dL or greater³. These levels have been associated with adverse health effects in recent scientific literature.

Testing indicates some Denver neighborhoods may be at a higher risk for an increased prevalence of children that are EBL. In 1995, a door-to-door survey in a low-income area with older housing just north-east of downtown Denver, measured a 16.2 percent prevalence of children with elevated blood lead levels.⁴ While these data were collected more than 10 years ago and are expected to have declined to reflect the national trend in blood lead levels, they still indicate the potential for an area with increased exposure potential. Similarly, a 2003 door-to-door study conducted in northeast Denver measured a 4.5 percent prevalence of children with blood levels of ≥ 10 µg/dL, after testing more than 900 children.⁵ These studies, as well as other community blood lead testing data, indicate there may be areas where children face a higher risk of lead exposure.

Guidelines from the Centers for Medicare and Medicaid Services state that Medicaid-eligible children should be tested for lead at 1 year and at 2 years of age, or at least once before the age of 6. Medicaid testing percentages are currently low and should be increased to better serve this high-risk population and gain an understanding of the true numbers of lead poisoned children in Denver.

Most lead exposure occurs through ingestion or inhalation. Children are at a higher risk for exposure because of their increased mouthing behaviors and frequent hand-to-mouth contact. Lead poisoning commonly results from a child incidentally touching a surface contaminated with lead dust or paint chips, or from mouthing a lead-containing object. Absorbed lead enters the bloodstream (where it can be measured with a blood lead test) and much of it is ultimately deposited into the bones. Lead from the bones can

¹ CDC, Preventing Lead Poisoning in Young Children. Atlanta, 2005.

² Colorado Department of Public Health and Environment, Lead Poisoning Prevention Program, data for 1996–2003

³ Denver Health and Hospital Authority, blood lead data for 2001–2006.

⁴ The 1995 Denver Blood Lead Study, Colorado Department of Public Health and Environment, Lead Poisoning Prevention Program, 1996.

⁵ Insert ref for Kids at Play Health Study

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reenter back into general circulation and result in long-term exposure, perhaps over many decades. Several factors that can increase the risk for exposure include health status (*e.g.*, poor diet, anemia, or pica behavior) or living in substandard housing.

The main source of lead poisoning for most Denver children is lead-based paint, or soils and other surfaces contaminated with deteriorated lead-based paint. Lead-based paint was available for residential use until 1978. The City and County of Denver has over 200,000 residential units built prior to 1978. However, in Denver, preliminary data and experience indicate houses built prior to 1940 that are in marginal or distressed condition present the highest risk for lead poisoning. Preliminary research shows there may be approximately 10,000 of these high- and medium-risk homes in Denver's low income neighborhoods.

In addition, there are a number of other potential sources of lead exposure that must be addressed in a primary prevention strategy; these include lead in soil (from all sources), cultural practices such as the use of lead-glazed pottery or lead-containing homeopathic remedies, as well as consumer products that may contain lead and be accessible to children.

III. Vision and Mission

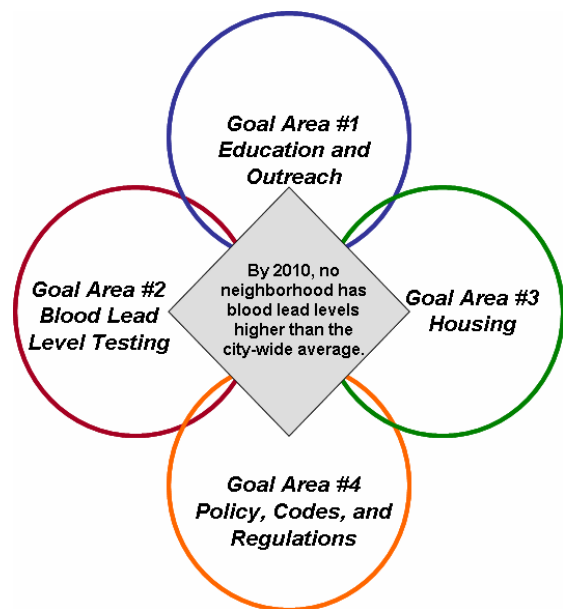
Our Long-Term Vision: No child in Denver has a blood lead level above 5 µg/dL.

Our Three-Year Mission: By 2010, no neighborhood in Denver has a prevalence rate of children with blood lead levels above 10 µg/dL that is greater than the city-wide prevalence rate. (To be clarified)

IV. Strategic Goals

The following strategic goal areas represent the advisory committee's plans for addressing childhood lead poisoning during the next three years. The four goal areas are interlinked and center around ensuring that the prevalence of lead poisoning in Denver neighborhoods is the same or lower than the city-wide average prevalence.

Each goal listed below contains specific, related objectives. Reaching objectives in one goal area supports the efforts in other areas. Action ideas and an action plan template are listed in following sections.



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GOAL AREA #1

Education and Outreach

STRATEGIC
INTENTIONS

- Define the issues and build a sense of urgency in the general public.
- Reach a large number of people in a cost-effective way.
- Provide clear information so citizens can make informed decisions.

OBJECTIVES

1. Develop and implement an educational awareness campaign that is promoted throughout the city and is prioritized to reach the following populations:
 - Parents, guardians, and caregivers in target neighborhoods (e.g. elevated blood lead levels and housing stock with the greatest risk of lead-based paint hazards) to explain lead poisoning, hazards, and ways to prevent exposure to lead.
 - Homeowners and landlords in target neighborhoods to inform them of lead hazards, housing codes, real estate notification and disclosure requirements, and what financial assistance might be available if repairs are needed.
 - Contractors, remodelers, and apprenticeship programs to explain lead safe work practices, prohibited practices with lead based paint, and training resources. Provide information at hardware and paint stores as well as through the city permitting office.
 - Professional health care communities, especially those serving Medicaid recipients, to inform them of the Medicaid testing requirements and mandatory reporting.
2. Establish partnerships with organizations, agencies, and individuals who can support the plan to eliminate childhood lead poisoning.

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GOAL AREA #2	Blood Lead Level Testing
STRATEGIC INTENTIONS	<ul style="list-style-type: none">- Have an accurate, rich dataset to assess the magnitude of Denver's lead poisoning problem and identify the high risk populations.- Use data to make strategic decisions for implementing this plan and to increase the public level of concern or sense of urgency to address childhood lead poisoning.- Create a blood lead testing system that targets high-risk children but is accessible by all.- Tie blood test results to services for children.- Identify all children with lead poisoning as quickly as possible in order to provide them with case management and other services.
OBJECTIVES	<ol style="list-style-type: none">1. Maintain State mandate to report all blood lead levels, and support the development of the State's existing database/registry or the implementation of a new tracking system to centralize records for all blood lead tests administered to children living in the City and County of Denver.2. Measure baseline screening rates for at risk populations and develop a plan for increased screening each year.3. Increase blood lead screening by adding a place for blood lead tests within immunization requirements for children required for enrollment in kindergartens, pre-schools, or educational programs.4. Work with other health programs, hospital immunization clinics and private health care providers, to get lead testing linked to current hemoglobin testing, immunizations and/or other health care periodicity schedules. (Uninsured children will received community-based testing with their case management.)

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GOAL AREA #3 **Housing**

STRATEGIC INTENTIONS - Ensure all housing is lead-safe for children under six.

- OBJECTIVES
1. Build a lead-safe housing registry to include all post-1978 homes and other homes deemed to be lead safe including all homes renovated or remodeled using city funds. Make rental registry available to public.
 2. Proactively identify and safely correct lead paint hazards in high risk homes or units by 12/31/2010. (Estimated to be at least 1,400)
 3. Increase the amount of support (e.g. funds, programs, incentives, and technical assistance) currently available to assist property owners with lead hazard control.
 4. Ensure entities using federal housing funds comply with federal lead-safe work practice, disclosure and pre-renovation education rules.
 5. Use the buying, selling, and renting of homes or other housing as an opportunity to assess and address lead hazards.

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GOAL AREA #4	Policy, Codes, and Regulations
STRATEGIC INTENTIONS	<ul style="list-style-type: none">- Support policies, codes, and regulations that are enforceable and cost-effective without creating negative unintended consequences.- Establish standards of conduct for homeowners and businesses that avert or reduce lead hazards.- Maintain an active program of public health surveillance and response for childhood lead poisoning prevention in Denver.
OBJECTIVES	<ol style="list-style-type: none">1. Develop a code (or add to an existing code) that gives the City of Denver authority to enforce safe cleanup or prevent the creation of lead hazards that present a danger of lead poisoning to children and where children are found to have lead poisoning.2. Support an ordinance that requires any individual who is “disturbing a lead-painted surface” to have lead-safe worker training and to understand how to manage lead hazards and that prohibits property owners or workers from undertaking actions that create lead hazards (e.g. sanding lead-based paint without controls).3. Investigate adding the inspection and repair of deteriorated paint using lead-safe work practices as a requirement for obtaining a daycare license.

ACTION PLAN

Within each goal area various objectives are listed. In order to begin implementation of the strategic plan, for each goal one or two objectives were identified as highest priority and possible action plans were developed.

The following action plan documents brainstorming ideas and recommended contacts and resources. Members from the Coalition will contact individual organizations to see if and how they can support the strategic plan mission and objectives.

The action plan for each goal area is a changing document and will be updated; as objectives are accomplished other objectives from the plan will be worked upon, as new resources are identified new contacts and actions will be added.

The action plan serves as a possible guide for reaching the overarching mission of the Coalition.

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Action Plan

GOAL AREA: Education and Outreach

<i>Objective 1.1: Parents and guardians</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Include blood lead testing with immunization information sent to parents at birth of child		Hospitals, OBGYN clinics, Nurse Family Partnership (state level), Bright Beginnings, Safe Kids Coalition	
Provide information on lead poisoning to parents, guardians and pre-natal care providers		Mothers of Preschoolers, Planned Parenthood, Monthly HeadStart meetings and bi-monthly nutrition newsletter, quarterly CSU Extension newsletter, WIC, Nurse Educators, Lamaze Instructors, Assoc. of Midwives	
Provide information on lead hazards and requirements through apartment guide	June 2007	Apartment Association of Metro Denver	Joe, Katie

<i>Objective 1.1: Caregivers</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Educate daycare and childcare providers through presentation to daycare center inspectors (state level)	June 2007		Mary Hilko, RMP&DC
Reach daycare providers through Quality Improvement funds for development (this is a source for people to get licensed and they have a registry)		Mayor's Office for Education & Children	
Provide education materials Rocky Mountain CED, non-city Head Start grantee serving 800 children in western Denver and all of the Western Slope		Rocky Mountain CED	
Work with HeadStart to provide free blood lead screenings in high risk neighborhoods	June 2007	HeadStart	Scheduled NDHC
Provide educational materials to private school providers		Catholic Charities	

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<i>Objective 1.1: Homeowners and landlords in target neighborhoods</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Media campaign on lead poisoning hazards and resources available, posters and newspaper ads	June-Aug 2007	NDHC	NDHC
Collaborate with welcoming services for neighborhoods to include info on lead poisoning and work with rec centers. (possible coupon for buyers in target)		Denver Parks and Rec, ?	
Schedule visits to neighborhood association meetings in target neighborhoods		Neighborhood Associations	
Institutionalize as part of neighborhood plan the identification of units that might need mitigation, so that community takes ownership		Planning Department planner who works with each neighborhood	

<i>Objective 1.1: Professional health care community</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Inform private care providers on testing, high risk areas, most recent research, and resources for low-level blood lead levels		CO American Academy of Pediatricians, Kaiser, Rose	
Provide information on most recent research and the issue of lead poisoning		Pediatricians Ground Rounds PEHSU (Region 8), CO Nurse Association, Schools of Nursing	
Research existing Medicaid testing rates and strengthen enforcement of the mandate by informing professionals serving Medicaid recipients of testing requirements		Medicaid	
Collaborate with Healthy People 2010, Thriving Communities to incorporate lead hazards into their plan		HP 2010	

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<i>Objective 1.1: Contractors, remodelers, apprenticeship programs</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Collaborate with permitting department to provide info on restricted activities (sanding, blasting, etc.) when renovating	May-June 2007	CPD	DEH and NDHC
Contact other organizations involved with renovations to inform them of hazards and provide LSWP training		Brothers Redevelopment	Katie
Incorporate LSWP in curriculum for apprentice programs		Warren Tech, Emily Griffith	

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ACTION PLAN

GOAL AREA: Blood Lead Level Testing

<i>Objective 2.1: Maintain State mandate to report all blood lead levels . . .</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Professional level conversation with CDPHE	June 2007	CDPHE	DEH/DHHA
Community level conversation with CDPHE		CDPHE, DPS/ ECE/ HeadStart/ Elbra Wedgeworth?	NDHC
Encourage maintenance of state mandate from parents and other voices to legislators		Target legislators, professionals Parents and caregivers	

<i>Objective 2.3: Blood lead screening as requirement for enrollment in kindergartens. . .</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Identify existing policies and the decision makers		DPS, HeadStart, ECE, State Board of Education	Katie
CASN- conference of school nurses, speaker on lead poisoning	Fall 2007	DPS School Nurses	Katie
Conduct outreach to professional organizations	By year end	CAAP, CAFP newsletters	Mark

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ACTION PLAN

GOAL AREA: Housing

<i>Objective 3.2: Proactively identify and safely correct lead paint hazards in high risk units</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Survey housing/neighborhoods first with a visual/ walking survey of conditions. Utilize volunteers, community orgs, health advocates. GIS/map target areas		CPD	GWD, NDHC With EPA grant
Second, complete assessment or testing for hazards on units identified as high risk.			NDHC
Third, fix hazards using grants/ incentives, training and educating the owners and landlords, and required under city code		NDHC (if income qualify), Tax credit?, "Good Neighbor Agreements"?, Stephanie Syner, Partner with industry?	NDHC, ?

<i>Objective 3.5: Use buying, selling and renting of homes to assess and address lead hazards</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Educate home inspectors/ appraisers, and encourage home inspectors to get certified as lead paint inspectors		Professional organizations, CDPHE APCD, Home inspectors professional organization	Collaborate w/ state
Work with lenders to require lead hazard assessment (eg. HUD loan)		Lenders, health advocates, politicians	Steering Committee
Require a permit/hazard assessment for rentals (See goal area #4)		City, health advocates, landlord/rental organizations, City Council/ politicians	

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ACTION PLAN

GOAL AREA: Policy, Codes, and Regulations

<i>Objective 4.1: Develop a code</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Review proposed changes to Housing Code that Bob and Gene are working on to make sure we can cover the issues we want to address.	Week of June 11	Bob McDonald	Steering Committee
Support the changes to Housing Code	June-July	City Council	Wendy, Katie, DEH, Amber
Explore additional language/interpretations of the Health Nuisance Code, and/or Neglected and Derelict Building Code to see if small changes can be made to address lead issues that can't be addressed in the Housing Code.	End of June 2007	City attorney, graffiti task force (they are already looking at code changes), city council	Wendy, Katie, DEH, Stephanie
Develop internal protocol for Housing Code inspectors to work with new changes to code.			Bob, Gene
Support additional staff and training to enforce the changes to the Housing Code		High level DEH managers, City Council, HUD LHC grant funding	
Explore the current law requiring registration of rental properties. If one exists, determine how to make sure the law is followed. If not, revisit the issue of rental registration.		Secretary of State	Gene, Katie

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<i>Objective 4.3: Require inspection of all licensed daycare facilities. . .</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Determine if there is an association of daycare providers. If so, contact them to discuss lead issues and proposed change. Get buy-in from them.			Steering Committee
Determine whether resources are available to assist daycares in repair of painted surfaces.			NDHC
Meet with supervisor of daycare inspections to discuss idea of inspecting for lead hazards.		Daycare inspection division	Bob, Gene,
Investigate the development of protocol requiring repair of painted surfaces in daycares using Lead Safe Work Practice		Daycare inspection division	Bob, Gene,
Develop outreach plan to non-registered daycare facilities			NDHC

<i>Objective 4.2: Support an ordinance about disturbing lead painted surfaces</i>			
ACTIONS TO ACCOMPLISH	WHEN	CONTACT	WHO
Make sure it is also incorporated into the Housing Code changes that someone can be cited for "creating a lead hazard". So, for example, inspectors can stop someone from sand-blasting their house if it is suspected to be lead-based paint.			Gene, Bob
Check to see if Nuisance Code or Other zoning codes can be interpreted to prevent the creation of lead hazards (there is a zoning code called "external effects" or something like that that might apply).		City Attorney, City Council	Steering Committee
See if this can be done with a Council "Resolution" rather than an ordinance. The resolution would result in more education and outreach.		City Council	Steering Committee