



Strategic Plan for Lead-Safe and Healthy Homes





Childhood lead poisoning annually impacts the lives of hundreds of families living in the District of Columbia. For decades, lead was used in many of our most pervasive commercial products -- interior and exterior paint, on building components, on toys, and on ceramics; gasoline; solder, used on food cans and on copper pipes; stained glass; water service lines; and plumbing fixtures. And now, lead exists in the vast majority of homes in the District as a silent hazard -- one that can threaten any family, regardless of income, race or age.

When lead-based paint deteriorates, not only is the paint toxic but the lead can also contaminate the invisible dust in a home. When contractors or homeowners sand and scrape paint off an old banister, wall, or window sill, immense amounts of lead may be released into the environment. When old lead pipes corrode or solder holding copper pipes together breaks down, tap water can be polluted with lead.

The scope of the threat is daunting.

As an environmental toxin, lead steals that which we most treasure in our children – their potential – and damages the kidney, heart and hearing as well. Science has irrefutably demonstrated that lead poisoning damages the brain and causes a drop in IQ. Lead exposure has been linked to lower test scores and to higher school drop-out rates; to a decreased ability to concentrate and to impaired judgment; and to hyperactive, aggressive, or even violent behavior. What does that mean for our children? It impairs their ability to perform well in school. It diminishes their potential to lead productive lives. And it hurts their chances of gaining and maintaining a good job. While this is obviously tragic for the affected children and their families, exposure to lead also carries serious consequences for society at large: among other things, dealing with lead poisoning means increased medical costs, increased special education costs, and increased juvenile justice costs.

Lead remains a significant concern in the District of Columbia. Almost 90% of the District's housing stock was built before the use of lead-based paint was restricted, in 1978. This means that most of the homes where District residents live are at risk of containing some lead-based paint. Underneath the city's streets lies a network of lead pipes several miles long that continue to transport drinking water into residents' homes. Front and backyards continue to harbor lead deposited for years by passing traffic, until the leaded gas phase-out was completed, just a couple of decades ago. Soil also contains lead paint chips where old homes



were once demolished, renovated, or destroyed by fire. These lead deposits remain more or less in place for decades, and pose imminent exposure threats.

Because of this legacy of lead, and the often permanent damage it causes to those exposed to it, the District Department of the Environment has developed a multi-tiered strategy for ending childhood lead poisoning in the nation's capital. This document, the 2011 Strategic Plan for Lead-Safe and Healthy Housing, is a key part of that commitment. It represents the work of the District Department of the Environment's experts on lead poisoning prevention and on healthy homes, as well as the input, feedback, and expertise of more than a dozen community groups, non-profits, healthcare providers and environmental experts in the District of Columbia, many of whom sit on the Department's Lead Elimination and Healthy Homes Advisory Committee.

This Strategic Plan signals a new era in the city's fight against lead exposure and sets performance expectations that the District Government and the public can use to monitor progress. It also sets a first-ever District agenda for creating and maintaining Healthy Homes, covering such additional environmental health threats as radon, carbon monoxide and toxic household products, as well as focusing on the benefits of integrated pest management and injury prevention in the home.

At its heart, the Strategic Plan is designed around the District's innovative new lead law, which makes prevention the overarching policy priority of the District when it comes to lead, calling not just for compliance with basic lead disclosure requirements, but for mandatory assurances of lead safety by landlords in rental homes occupied by young children, and requiring contractors and others to use lead-safe work practices at all appropriate times.

The Strategic Plan also embraces the holistic concept of a Healthy Home, encompassing the mitigation of other environmental health hazards that create potentially harmful exposure risks for District residents. This approach helps ensure that while eliminating lead-based paint hazards, the District Department of the Environment also takes a leadership role in helping identify and mitigate other environmental hazards and safety threats in District residences.

Asthma triggers, pesticide contamination, home injuries and unintentional poisonings are all problems that are exacerbated and even caused by the presence of environmental hazards and safety threats. This Strategic Plan builds on the research-backed evidence that these problems -- which cost District residents dearly in terms of quality of life and financial resources -- are often easily preventable.



| Table 1: 2011 Strategic Plan Goals | |
|---|---|
| GOAL | HIGHLIGHTS |
| Identify and eliminate hazardous lead exposures | Enforce ban on deteriorated paint in pre-1978 housing. Initiate proactive measures to eliminate hazards before children are exposed to lead. Improve lead screening rate for 1 and 2 year olds. |
| Reduce environmental triggers of asthma | Identify and prevent exposure to indoor environmental triggers of asthma. Enforce codes that reduce asthma triggers. Develop program and attract resources to mitigate indoor asthma triggers. |
| Prevent illness caused by radon, carbon monoxide, smoking, pesticides, other toxic exposures | Provide radon tests when conducting environmental education in homes. Provide referrals to programs with resources to address these hazards. Educate residents on health impacts and on self-protective actions. Publicize and enforce DC pesticide notification law. |
| Prevent home injuries | Assess high-risk homes for safety threats and provide guidance to residents geared to create safer living areas, covering issues like poisoning prevention, fire safety and trip-and-fall hazard avoidance. |
| Create expectation for healthy housing | Train and equip inspectors and home visiting programs to use multi-hazard assessment tools. Work with other agencies to develop local capacity to ensure healthy homes. |



What is lead poisoning?

When a child accumulates lead in his or her body, it is commonly referred to as lead poisoning.

Over the years, lead has been mixed with gasoline and with paint, used as solder for cans and copper pipes, as piping for drinking water, blended with vinyl and with brass, employed as protective shielding against radiation, as well as in the manufacture of batteries, bullets, tire weights, fishing sinkers, and computer components.

Why is lead a problem?

For thousands of years, lead has proven to be a very useful and versatile substance. For nearly as long, we have also known that exposure to lead causes serious adverse health effects. It is a powerful neurotoxin, which means exposure can damage the brain. It can also injure other soft tissues and organs and can interfere with the formation of blood. Exposure to enough lead can even kill. Both children and adults are vulnerable to lead's health effects, as are household pets.

The U.S. Centers for Disease Control and Prevention ("CDC") has set 10 micrograms of lead per deciliter of blood (" $\mu\text{g}/\text{dL}$ ") as a marker that should spark certain public health actions, but acknowledges that harmful effects are also experienced by children with levels substantially lower than that in their blood. The CDC, the District of Columbia Department of the Environment, and lead experts across the nation are in agreement that **there is no known safe level of lead in the human body.**



Where is lead?

Nearly 90 percent of homes in the District of Columbia were built before 1978 and therefore are likely to have lead paint inside.

Lead can be present in many places, both inside and outside the home environment. Most experts agree that the most significant current source of lead exposure is paint in older homes that have not been well maintained over the years. Similarly, when renovation, paint maintenance, or other repair work “disturbs” old paint, dangerous lead hazards can be created that cause immediate health threats. For these reasons, it is critical that paint be routinely maintained in intact condition, and that any work that is done that disturbs painted surfaces be done in a “lead-safe” manner.

When lead paint deteriorates, it forms tiny particles of dust that can be invisible to the naked eye, and that settle on floors and other horizontal surfaces. These lead particles are also created when old windows are opened and shut. Because young children like to play on the floor, like to put their fingers on window sills, and like to put their fingers and toys in their mouth, lead dust is the number one way that children get exposed to lead. Similar exposure to lead can occur because of lead-contaminated bare soil.

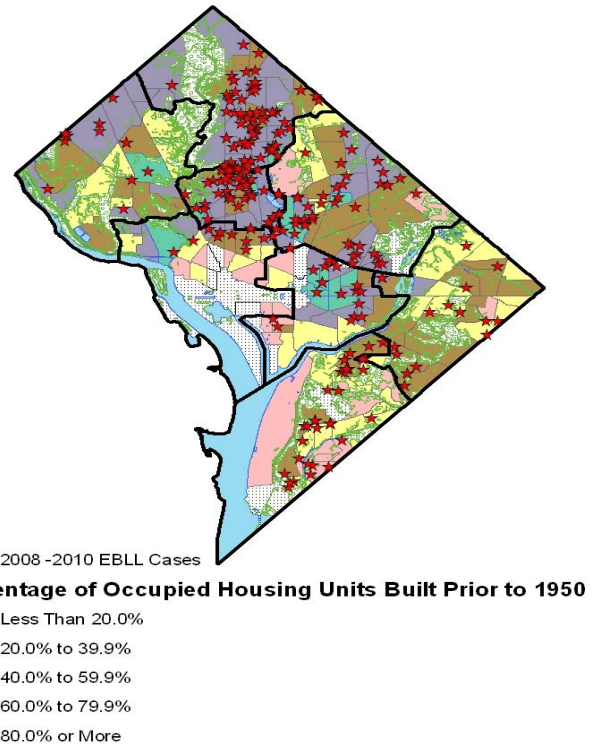


Childhood Lead Poisoning

The age of the housing stock in the District of Columbia potentially places many children at risk for adverse health conditions influenced by environmental hazards in the home, particularly among households with limited resources to mitigate such hazards. As exhibited in Figure 1, the majority of elevated ($\geq 10 \mu\text{g/dL}$) blood lead level (EBLL) cases within the District occur in those geographic areas with the highest concentration of occupied residential housing built prior to 1950.

While the number of children under 6 years of age screened for lead in the District has steadily increased in recent years, the percentage of screened children with an EBLL has remained relatively stable (Table 1). The highest number and percentage of screened children under 6 years of age with an EBLL are observed in Wards 1, 4, and 5. Combined, these Wards account for 65% of the children under 6 years of age in the District with an EBLL result in 2010. Given that adverse health effects have been documented for children with lead exposures below the threshold signifying an EBLL, it is also important to bring attention to the nearly 3% of screened children under 6 years of age identified each year in the District with a blood lead level between 5 and 9 $\mu\text{g/dL}$ (Table 1).

Figure 1: Residential Location of Children < 6 Years of Age With an Elevated ($\geq 10 \mu\text{g/dL}$) Blood Lead Test¹ Result 2008-2010 and the Percentage of Occupied Housing Units Built Prior to 1950 by U.S. Census Tract². District of Columbia



¹ DDOE Lead & Healthy Housing Division Surveillance Data
² 2000 U.S. Census

| Table 1: Number and Percentage of Screened Children < 6 Years of Age With Blood Lead Levels (BLL) $\geq 5 \mu\text{g/dL}$ ^{1,2} , District of Columbia 2008-2010 ⁴ | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| Geographic Area | 2008 Calendar Year | | | 2009 Calendar Year | | | 2010 Calendar Year | | |
| | Number of Children < 6 Years of Age Screened | BLL Result | | Number of Children < 6 Years of Age Screened | BLL Result | | Number of Children < 6 Years of Age Screened | BLL Result | |
| | | ≥ 5 to <10 $\mu\text{g/dL}$ ^{1,2} % (n) | $\geq 10 \mu\text{g/dL}$ ^{1,2} % (n) | | ≥ 5 to <10 $\mu\text{g/dL}$ ^{1,2} % (n) | $\geq 10 \mu\text{g/dL}$ ^{1,2} % (n) | | ≥ 5 to <10 $\mu\text{g/dL}$ ^{1,2} % (n) | $\geq 10 \mu\text{g/dL}$ ^{1,2} % (n) |
| Washington D.C. | 15,247 | 3.4 (522) | 0.6 (97) | 15,695 | 2.9 (460) | 0.6 (101) | 16,196 | 2.8 (448) | 0.7 (107) |
| Ward 1 | 1,853 | 2.8 (52) | 1.1 (20) | 1,990 | 2.9 (57) | 1.0 (19) | 2,055 | 2.3 (47) | 0.8 (17) |
| Ward 2 | 916 | 2.3 (21) | 0.4 (4) | 926 | 2.5 (23) | 0.3 (3) | 1,029 | 1.8 (19) | 0.3 (3) |
| Ward 3 | 1,452 | 1.4 (21) | 0.1 (2) | 1,252 | 1.8 (23) | 0.4 (5) | 1,221 | 2.3 (28) | 0.4 (5) |
| Ward 4 | 2,318 | 5.0 (117) | 1.1 (25) | 2,419 | 3.7 (89) | 1.0 (23) | 2,649 | 3.8 (101) | 1.3 (34) |
| Ward 5 | 1,757 | 3.5 (62) | 1.0 (18) | 1,983 | 4.1 (81) | 1.3 (25) | 1,890 | 3.9 (74) | 1.0 (19) |
| Ward 6 | 1,380 | 4.9 (67) | 0.6 (8) | 1,448 | 2.6 (38) | 0.3 (4) | 1,548 | 2.8 (43) | 0.5 (7) |
| Ward 7 | 2,134 | 3.3 (71) | 0.2 (4) | 2,167 | 2.0 (44) | 0.4 (8) | 2,255 | 2.4 (55) | 0.3 (7) |
| Ward 8 | 2,659 | 3.0 (80) | 0.5 (14) | 2,770 | 2.6 (72) | 0.5 (13) | 2,857 | 2.3 (67) | 0.5 (13) |
| Unknown Ward ³ | 778 | 4.0 (31) | 0.3 (2) | 740 | 4.5 (33) | 0.1 (1) | 692 | 2.0 (14) | 0.3 (2) |

¹ Prevalence
² Cases based on highest BLL result for each child reported during specified calendar year
³ Residential address not reported or not matched in batch geocoding
⁴ DDOE Lead & Healthy Housing Division Surveillance Data



Because of the aging housing stock in Washington DC, the District is pursuing a 100 percent screening rate for children at ages 1 and 2.

The only way to know for sure if a child has lead in their body is to have a qualified health professional conduct a lead screening (a blood test). In Washington D.C., lead screening for children is more than just a good idea -- it's the law. Because lead poisoning disproportionately affects those with less access to healthcare, it is critical to find ways to screen all children.

The law stipulates that children must be tested twice by the time they are two years old, the first test occurring between months 6 and 14, and the second between months 22 and 26. Even if a child misses one or both of these screenings, the law still requires that child be tested twice before six years of age. Also, when additional risk factors so dictate, such as living in a pre-1978 home that has recently undergone renovation, or having a sibling with lead poisoning, children may need to be screened at additional moments in their lives, as further detailed in District regulatory requirements.

While screening is important, even vital to determine the extent of the problem in the nation's capital, as well as to track progress over time, it's also in fact secondary to the essential goal of preventing harm before a child is exposed. The District Department of the Environment is dedicated to the goal of "primary prevention" and is focused on identifying lead-based paint hazards without using children as the proverbial "canary in the coal mine." The District of Columbia is determined to use its enforcement resources wisely, to direct contractors and others to use lead-safe work practices, and ensure that the District's homes are safe places for families.



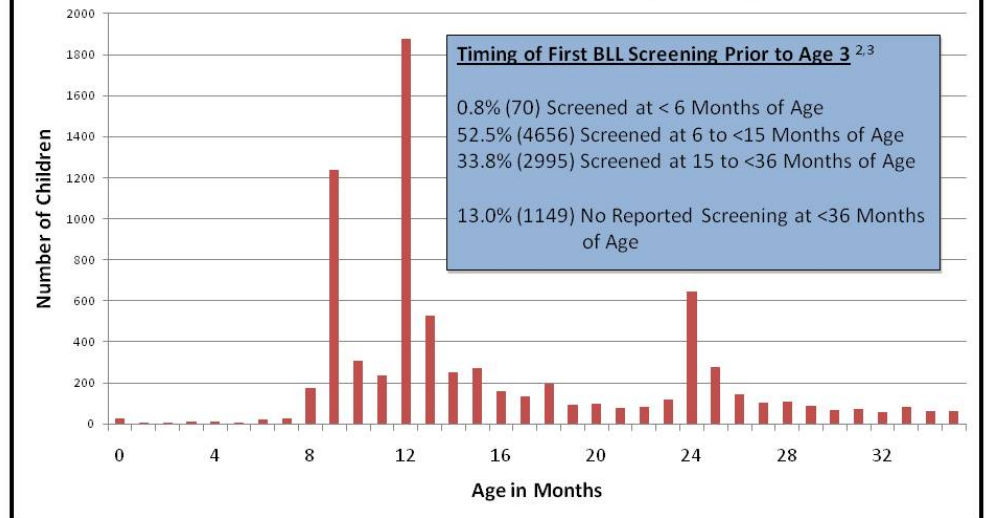
Childhood Lead Screening

Lead screening laws in the District of Columbia are designed to ensure the identification of children with elevated blood lead levels and to maximize opportunities for early intervention. Unfortunately, current surveillance data document less than optimal screening patterns among children under the age of three residing in the District.

Approximately 8,870 children were born in the District of Columbia in 2007. An estimated 52.5% (n=4656) of the children within this birth cohort received their first lead screening between 6 and 14 months of age (Figure 2) and an estimated 19.5% (n=1729) received a second EBLL screening between 22 and 26 months of age (Figure 3).

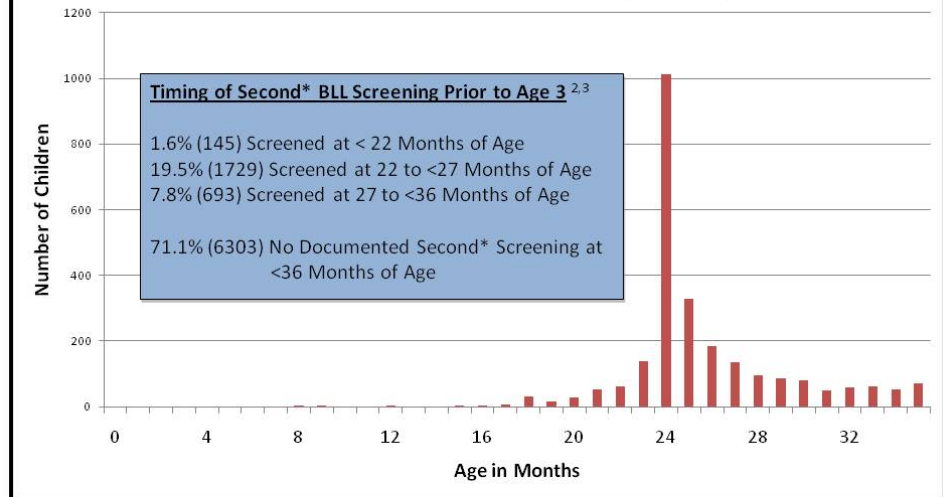
While it is encouraging to note that the majority (87.0%) of children born in 2007 received at least one screening for an elevated blood lead level (EBLL) prior to turning three years of age (Figure 2), it remains perplexing that slightly over one-third received their first blood lead test after 14 months of age and 71.1% (n=6303) failed to receive a second EBLL screening before three years of age (Figures 2 & 3). Such facts support the need for enhanced efforts to increase awareness and compliance with laws in the District concerning childhood lead screening.

Figure 2: Age at First Blood Lead Level (BLL) Screening, District of Columbia 2007 Birth Cohort (n=8870)^{1,2,3}



¹Births: Final Data for 2007, National Center for Health Statistics
² 5 children excluded from screening count due to inaccurate Date of Birth and/or Sample Date
³ Data Source: DDOE Lead & Healthy Housing Division Surveillance Data 2007-2010, 06/29/2011

Figure 3: Age at Second* Blood Lead Level (BLL) Screening, District of Columbia 2007 Birth Cohort (n=8870)^{1,2,3}



* ≥8Months Between Screenings
¹ Births: Final Data for 2007, National Center for Health Statistics
² 5 children excluded from screening count due to inaccurate Date of Birth and/or Sample Date
³ Data Source: DDOE Lead & Healthy Housing Division Surveillance Data 2007-2010, 06/29/2011



Home and Health

Children's health is impacted by their home environment, and injuries and illness can be prevented by taking simple, often inexpensive steps.

Experts on housing quality have determined that a top predictor of health outcomes for children is the condition of their home. Lead and other toxins, mold, pests, clutter and unhealthy gases like radon are all connected to underlying conditions of the home that can be addressed holistically. In Washington DC, 53,000 children and adults suffer from asthma. Mold, dust mites, insect and rodent residues, other allergens and poor air quality can all lead to the development of asthma and more frequent and severe asthma attacks for those who already have the condition. Exposure to pesticides and some chemical-based cleaning products have been linked with cancer and liver problems. Clutter is a leading cause of trip and fall injuries and of fires, and the lack of a carbon monoxide detector causes annual preventable deaths to D.C. residents. Over-reliance on chemical cleaners and air fresheners increases the chance of a poisoning occurring within the home.

If a hazardous home can put families at risk, a properly maintained home can help keep a family healthy. If the city and its many partners -- community groups, academics, healthcare providers, child health advocates, non-profits, the housing industry and the property owner community -- can begin to take measurable steps to improve the condition of many of the District's homes, research indicates that these health problems would likely diminish. This is the vision at the heart of this Strategic Plan.



The Strategic Plan

Vision: All DC residents have a right to live in lead-safe environments and affordable healthy homes.

Purpose of the Plan: To provide a framework for increasing public awareness, building community capacity, fostering public-private collaboration, and improving government programs and policies in order to enhance health and housing quality.

Goal 1. Foster expectation for green and healthy housing

STATEMENT OF NEED

In terms of public health history, Healthy Homes is a relatively new concept. The rise of chronic disease in the United States in the late 20th century led researchers to focus on understanding the causes of illnesses like asthma, attention deficit disorder, diabetes and other health and developmental problems. They found that the condition of the home and habits related to home maintenance were strongly associated with the exacerbation and in some cases the onset of such illnesses, as well as injury, fire and home poisonings. The number one step many people can take to improve their health is to improve their home's condition. DDOE will take a leadership role in bringing this message to the community, academic organization, healthcare providers and the housing industry.

Objective 1.01 Re-tool programs and policies

- Action (a) Survey families and sample homes to establish comprehensive baseline data.
- Action (b) Train and equip inspectors and home visiting programs to use multi-hazard assessment tools.
- Action (c) Continue to improve lead and healthy homes services, in partnership with other DC government agencies, coordinate their delivery so as to eliminate duplication and maximize resources, and establish community partnerships wherever and whenever possible.

Objective 1.02 Educate tenants, homeowners, and landlords

- Action (a) Conduct information campaigns that focus on healthy homes, to bolster residents' understanding of the link between home and health.
- Action (b) Provide opportunities for training in healthy homes basics, including hazard prevention and remediation, for landlords and owners of property with code violations.



Objective 1.03 Encourage and enforce standards in rental housing

- Action (a) Train housing inspectors in agencies such as DCRA and DCHA to be proactive regarding healthy homes concerns.
- Action (b) Support the enactment of code provisions that promote healthy housing.
- Action (c) If a significant problem is identified within a particular unit at a multifamily property, inspect for the problem throughout the property.

Goal 2. Eliminate hazardous lead exposures.**Statement of Need**

The majority of homes in the District of Columbia have some lead inside. DC homes are among the oldest in the United States, with 51% of the DC housing stock built before 1950 – the time period when the highest amount of lead was typically added to paint. That compares with a national average of 22% (US Census, 2000).

All told, almost 90% of homes built in DC pre-date the last year lead was legally permitted in residential paint, 1978. Many of these homes could potentially cause lead poisoning if not properly maintained.

During 2010, 107 children under the age of six were tested with a blood lead level equal to or greater than 10 micrograms per deciliter (10 µg/dL), which is the official level of concern for the CDC, and the level that triggers case management activities by the DDOE Childhood Lead Poisoning Prevention Program. In addition, some 448 children were found with a blood lead level between 5µg/dL and 9µg/dL, levels at which harm can start occurring, according to the CDC. These facts highlight the need for a broad strategy to rapidly identify children when they are harmed by lead, and especially to prevent exposure in the first place.

Preventing exposure requires identifying hazardous conditions and eliminating them, either through regular paint maintenance or with lead abatement measures. This kind of specialized work requires specially trained and DDOE-certified personnel, including dust sampling technicians, risk assessors and abatement workers, as well as Certified Renovators and Firms, in compliance with federal law. To meet the growing need for these services in the District of Columbia, it's also critical to focus on building the local capacity in these specialized arenas. In effect, this presents a local “green jobs” development opportunity.



Objective 2.01 Prevent exposure to lead hazards

- Action (a) Educate and train property owners and managers, real estate agents, maintenance workers and contractors about the dangers of deteriorated paint, renovation work, painting, lead in plumbing, about other sources of lead exposure, and about relevant DC laws.
- Action (b) Provide families with culturally competent self-protective information about lead poisoning prevention, including the dangers of deteriorated paint, renovation work, painting, lead in plumbing, about other sources of lead exposure, and about relevant DC laws.
- Action (c) Prohibit deteriorated paint and other lead-based paint hazards in rental housing, and enforce by such means as -- but not limited to -- requiring lead-safe repair including passing clearance tests if hazards are cited, and requiring clearance at rental turnover.
- Action (d) Require lead-safe work practices by trained workers during renovation and painting.
- Action (e) Require a targeted clearance examination after significant renovation and painting jobs to establish that no hazards have been created by the work.
- Action (f) Ensure that schools and daycare facilities are free of lead hazards, including soil, water, dust and paint.
- Action (g) Target inspections and enforcement to high-risk properties, schools and daycares, and ensure compliance occurs in a timely fashion.
- Action (h) Provide funding for repair of lead hazards, with priority given to low-income housing.



Paint-based lead hazards in the home can look like this....



But after a renovation, lead hazards can also look like this. Unsafe work may leave invisible and dangerous hazards behind.



Objective 2.02 Have effective systems for identifying lead-poisoned children

- Action (a) Educate health care providers about the District's screening laws and about best practices, including anticipatory guidance for caregivers on environmental hazards and appropriate screening practices after age two.
- Action (b) Ensure that school nurses and daycare providers report children not tested for lead to DDOE for appropriate outreach response.
- Action (c) Develop materials and seek opportunities to educate teachers and service providers about screening laws.
- Action (d) Link screening data with outreach initiatives, and target intensive, in-home outreach and environmental assessment to high-risk families.
- Action (e) Enforce the District's and Medicaid's screening laws.
- Action (f) Use Medicaid and State Children's Health Insurance Program (SCHIP) funds to pay for blood lead tests conducted on covered children and for case management services for lead poisoned children.
- Action (g) Initiate Medicaid data sharing activities.



The only way to know if your child has lead in their body is to have her screened by a medical professional.



Objective 2.03 Provide appropriate interventions for lead-poisoned children

- Action (a) Investigate all possible lead exposure sources.
- Action (b) Minimize risk of further exposure to any known exposure sources.
- Action (c) Require rental property owners to eliminate lead-based paint hazards, using independent certified abatement contractors whenever appropriate, and to pay for relocation costs.
- Action (d) Assist owner-occupants in eliminating proven exposure sources.
- Action (e) Provide families with self-protective information about lead poisoning prevention.
- Action (f) Use Medicaid/SCHIP funds to pay for investigation and case management.
- Action (g) Target enforcement and monitoring activities to properties that have poisoned children.

Objective 2.04 Ensure adequate capacity to effectively address EBL response, including completion of ordered repairs, turnover clearance, lead-safe renovation, and other related services.

- Action (a) Operate lead-based paint activities and renovation programs that are at least as protective as the EPA model programs.
- Action (b) Conduct outreach, perform technical assistance, and support accredited training, to fill gaps in capacity and minimize costs to property owners.
- Action (c) Ensure appropriate reciprocity regarding certification and training accreditation with other jurisdictions.
- Action (d) Develop and maintain lead-safe housing for temporary relocation of children with an elevated blood lead level or others found living in high-risk housing conditions.



Goal 3. Reduce environmental causes of asthma

STATEMENT OF NEED

The District continues to rank among the jurisdictions in the United States with one of the biggest asthma problems, despite declining overall morbidity and mortality trends. Asthma affects District residents of all ages, racial/ethnic backgrounds, geographic locations and socioeconomic levels. Among children, rates of hospital visits for asthma are 12 times greater in the lowest income areas than in affluent areas.

Objective 3.01 Provide environmental health services and education to asthma patients

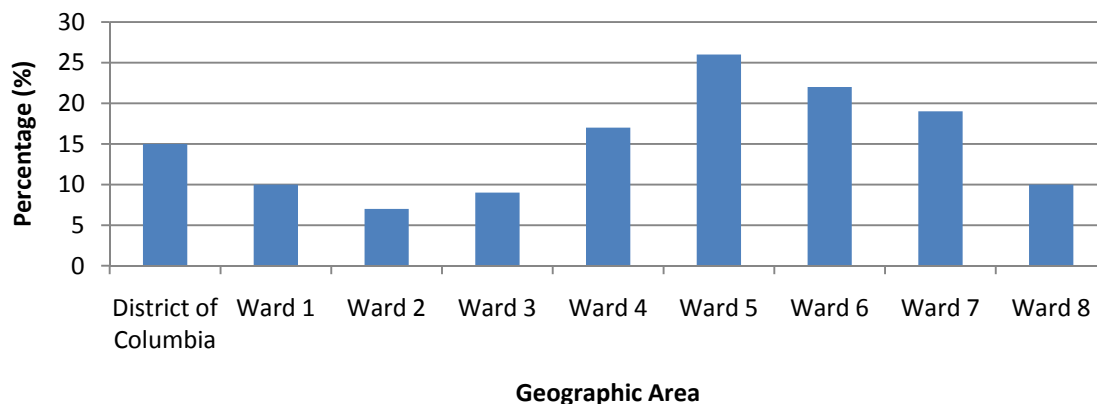
- Action (a) Provide the families of asthma patients with:
- * Home visits that include assessment for asthma triggers and family education regarding reducing exposure through prevention and control of exposure sources;
 - * Environmental interventions to reduce or eliminate asthma triggers;
 - * Resources to reduce asthma triggers, including but not limited to pillow and mattress covers, and culturally competent self-protective information about environmental causes of asthma triggers, self-administered assessment kits and how-to advice about dust control, pest management, smoking cessation, and asthma trigger mitigation.
- Action (b) Educate physicians, neonatal programs, school nurses, truancy services, child/family services, and other providers about tools for assessing and addressing environmental causes of asthma.
- Action (c) Secure Medicaid or other dedicated funding for assessments and interventions in severe cases, as recommended by case management staff.
- Action (d) Ensure access to inpatient and outpatient treatment.



Objective 3.02 Make and keep homes asthma-safe

- Action (a) **Include asthma prevention and control inspection or environmental assessment interviews in lead case management, pediatric care, neonatal visits, truancy services, child/family services, and similar direct service programs that benefit high-risk families.**
- Action (b) **Secure Medicaid or other dedicated funding for assessments and interventions, e.g., dehumidifiers, air purifiers, materials to repair undesirable openings to the outdoors, and dust mite elimination techniques.**
- Action (c) **Provide all families with culturally competent self-protective information about the environmental causes of asthma, including self-administered assessment kits and how-to advice about hazard mitigation.**
- Action (d) **Educate property owners and contractors about asthma’s environmental causes.**
- Action (e) **Train inspectors in the importance of addressing moisture, mold, rodents, insects, pesticides, and other asthma triggers.**
- Action (f) **Clarify and enforce code requirements that prevent exposure to moisture, mold, rodents, insects, pesticides, and other asthma triggers, and target enforcement to high-risk properties.**

Figure 4: Prevalence of Current Asthma Among Children < 18 Years fo Age by Ward, District of Columbia 2007¹



¹ Data Source: District of Columbia 2009 Asthma Fact Sheet; Behavioral Risk Factor Surveillance System (BRFSS)



Goal 4. Prevent illness caused by radon, carbon monoxide (CO), smoking, pesticides, and other toxic exposures

STATEMENT OF NEED

Radon is an odorless, colorless gas that can seep out of the ground and into a home. It is the second leading cause of lung cancer in the United States. In limited testing results from the upper NorthWest section of the District, radon levels have been found above EPA’s action guideline, as well as in homes in other quadrants of the city. Carbon monoxide is a poisonous gas that can be life-threatening, yet is completely avoidable. Pesticides can often do more harm than good, and more education is needed about the appropriate use and benefits of integrated pest management techniques. While a leading cause of residential fire deaths is smoking, exposure to second-hand smoke also poses acute risks, especially for young children and pregnant women. All these environmental health threats can and do cause harmful health effects, especially to the most vulnerable sectors of our population. More informed decision-making is needed to reduce the potential for harmful exposures to these toxins and increase the use of alternative substances and best practices in the nation’s capital.

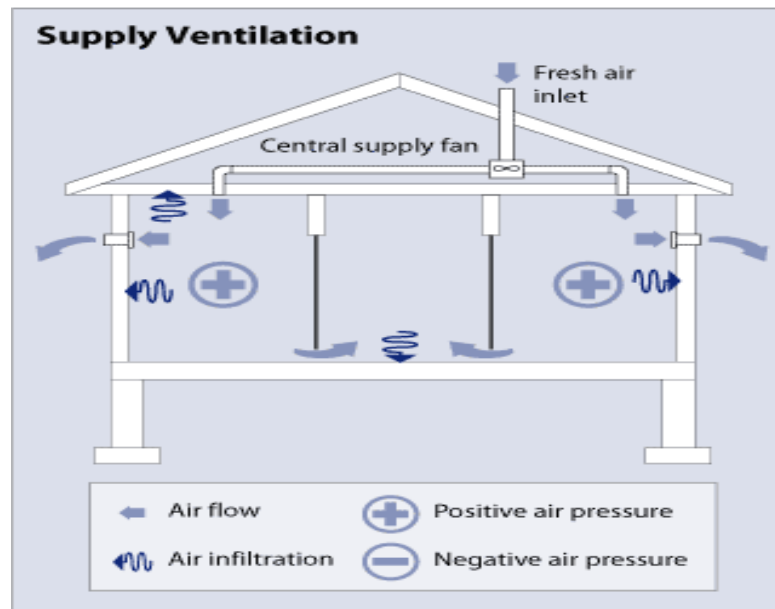
Objective 4.01 Promote appropriate ventilation in homes

Action (a)

Adopt and enforce the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 62.2 standard for ventilation in low-rise residential properties.

Action (b)

Target mitigation resources wisely, e.g., at inoperable windows.



Action (c) Educate consumers about issues such as the hazards of radon and CO, unvented stove hoods, and stack effect, always seeking to balance energy conservation with improved indoor air quality.

Objective 4.02 Ensure occupants are warned about toxic exposure levels of radon and carbon monoxide

Action (a) Provide radon test kit to DC families, in particular those that live in high-risk areas of the District.

Action (b) Enforce radon disclosure requirements.

Action (c) Require active depressurization systems in new construction if neighborhood radon levels test above 2 pico-Curies per liter, and encourage passive systems elsewhere.

Action (d) Test homes and combustion appliances for CO exposure.

Action (e) Require CO alarms in rental properties with combustion appliances or attached garages.

Action (f) Work with other DC agencies to enforce the District smoke alarm law, and educate residents on the requirement to use smoke alarms.



Objective 4.03 Eliminate use of toxic pesticides

- Action (a) Help publicize the Loretta Carter Hanes Pesticide Consumer Notification law.
- Action (b) Provide training on IPM and seek to create IPM incentives for licensed pesticide operators.
- Action (c) Educate rental, commercial, and public property managers about alternatives to using toxic pesticides in liquefied form.
- Action (d) Provide families with self-protective information on the safe use of toxic pesticides, including how-to advice.
- Action (e) Restrict use in or on DC-owned property (procurement restriction) to situations where no alternative safer product is effective.
- Action (f) Restrict retail sale of toxic pesticide products for indoor use.

Objective 4.04 Reduce residential exposure to environmental tobacco smoke

- Action (a) Educate consumers, builders and property owners about design and engineering controls that can reduce smoke drift between homes.
- Action (b) Issue guidance for transitioning multifamily properties to smoke-free indoor environments.

Objective 4.05 Reduce residential use of toxic products

- Action (a) When conducting in-home, lead-related education, include “under the sink” assessments to help residents identify and reduce their reliance on air fresheners and on aerosol and chemical-based cleaning products.
- Action (b) Distribute educational brochure on healthy cleaning at health fairs and educational events.
- Action (c) Redesign home educational curriculum to include information on the dangers of toxic products.
- Action (d) Educate community leaders and Area Neighborhood Commissioners on the hazards of toxic products and the benefits of “Healthy Homes.”



Goal 5. Prevent home injuries**STATEMENT OF NEED**

There was a time when injury was viewed by health professionals as a random phenomenon. Health researchers have now demonstrated that injuries in the home are directly related to structural and safety aspects of the home, the amount of open floor space, and changeable behaviors. According to the Surgeon General's 2009 Call to Action to Promote Healthy Homes, "an estimated 55% of unintentional deaths from injuries occur at home" for persons under 20 years of age. Simply put, many of the injuries that repeatedly occur in the United States can be prevented.

Objective 5.01 Reduce structural hazards

- Action (a) Educate property owners, property managers, families and schoolchildren about injury sources in the home environment.
- Action (b) Provide assistance to eliminate problems that pose tripping hazards and similar concerns.
- Action (c) Enforce requirements in rental housing for functional lighting in common areas, sound railings, floors and steps in good repair, etc.
- Action (d) Gather data and conduct analysis on the link between structural hazards and injuries to DC residents.
- Action (e) Train all DC Government staff who conduct home visitations, to perform visual assessments that include structural hazards and other safety issues.

Objective 5.02 Draw attention to non-structural safety issues

- Action (f) Promote use of safely designed cribs, safety gates, window guards, bathtub safety handles, and childproof locks, electric sockets, and blinds and shades.
- Action (g) Discourage excess furnishings and belongings that impede movement, create trip hazards and block exits.
- Action (h) Implement outreach programs and modify existing DDOE educational curriculums to include health and safety concerns.

