

THE CASE FOR HEALTHIER HOMES

Recommendations for the Pittsburgh Region

Executive Summary and Recommendations

PROTECT CHILDREN



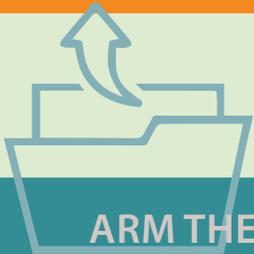
PROTECT PEOPLE WHO RENT



DECLARE HEALTHY HOMES A PUBLIC HEALTH POLICY PRIORITY



ARM THE PUBLIC WITH ACCESS TO INFORMATION



GUARANTEE GOALS THROUGH MONITORING AND REPORTING

NOVEMBER 1, 2017

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“The connection between health and the dwelling of the population is one of the most important that exists”

– Florence Nightingale –

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Executive Summary

For those of us who live in Allegheny County, we are lucky to be immersed in beautiful scenery and a rich history. Unfortunately the regional topography and geologic formations, as well as the above-average age and poor condition of our housing stock, can also pose health risks to our residents. This paper focuses on factors that are common in the homes of the Pittsburgh region, such as lead paint, radon, and moisture incursions that lead to mold. We start by examining efforts to address these concerns that are currently underway in the City of Pittsburgh, Allegheny County, and the regional non-profit community.

UNDERSTANDING COMMON HEALTH RISKS

Lead has received a lot of attention in the media of late, especially in Pittsburgh. Lead exposure is extremely detrimental to the developing brain, making children particularly vulnerable to a host of problems including developmental disorders, reduced IQ, attention deficit hyperactivity disorder (ADHD), and others. The most common type of exposure is through the ingestion of lead paint dust. Unfortunately, the bulk of Pittsburgh's housing stock is at risk, with the majority of it having been built prior to 1978, when lead-based paint was outlawed in residential buildings.

Lead does not break down over time or go away on its own, and its damage cannot be reversed. There is no safe level of exposure to lead, and lead poisoning can result from many sources including lead paint dust (the most common source of exposure), but also lead in water and soil around the house. At the moment, much of the focus on lead remediation across the country is geared toward secondary prevention, which intervenes after a child's blood test is confirmed to contain a certain amount of lead. More progressive approaches involved primary prevention, which seeks to eliminate lead risks before children are exposed to them.

Mold is a risk wherever there is moisture. Moisture can result from a variety of conditions, many of which are common in our region: groundwater seeping through foundation cracks or unfinished basement floors, rainwater leaking through improperly sealed roofs and walls, even improperly air-sealed homes that result in poor ventilation and thus condensation in walls and attics. Exposure to mold can cause a host of problems, such as asthma or obstructive lung disease or lung infections in more serious cases. If homes are weatherized or air-sealed to reduce drafts without properly addressing the factors that lead to mold, often the health hazards can be exacerbated.

Radon is a colorless, odorless, radioactive gas that results from the decay of uranium. The geologic makeup of Southwestern Pennsylvania puts Allegheny County in an area considered by the Environmental Protection Agency (EPA) to be Zone 1. A Zone 1 designation means the predicted average radon level is over 4 pico curies per liter (pCi/L), the level at which the EPA recommends corrective action. Long-term exposure to radon gas is harmful specifically through inhalation of the radioactive particles, which settle in the lung tissue and cause damage, leading to cancer. Any home, regardless of age or condition is at risk for the presence of radon gas. While some states have requirements for radon-

resistant construction for newly-built homes, Pennsylvania is not one of them. Radon testing and installation of mitigation systems are relatively simple and inexpensive, but the general awareness of radon's existence and risks remain low.

Despite outreach and educational materials provided through various governmental and non-profit organizations, these risks do not appear to be a high priority in the minds of residents. Such home health risks are shown to have a disproportionate impact on low-income households. Older homes in disrepair tend to have higher risk for lead paint and mold, and their residents are likely to be focused on more immediate concerns, such as food or rent, than they are on long-term concerns, such as home efficiency or health. Unfortunately, even for households that understand the risks, not everyone has the latitude to make necessary changes or repairs. For instance, tenants who live in substandard housing may not always feel comfortable making a complaint for fear of retaliation from the landlord. To that end, there are policies in place at the federal, state, and local levels throughout the country to support stakeholder education, risk remediation, and tenant protections.

CCI'S EFFORTS THROUGH "GRASSROOTS GREEN HOMES"

As a non-profit organization focused on healthy and efficient homes, CCI has had the benefit of interacting with a large number of residents (both homeowners and renters) and seeing some of these issues first-hand. Our community outreach program called *Grassroots Green Homes*, which is made possible through generous funding from the R. K. Mellon Foundation, recently engaged over 500 community members in the Pittsburgh neighborhoods of Oakland and Uptown with the goal of increasing their knowledge base around energy efficiency and home health, providing them with low-cost tools and tips to make changes in their own homes, and encouraging them to coach their friends and neighbors in adopting these simple changes as well.

We gathered information from our participants about common home issues they encountered and fixed, how frequently they participated in picking up their toolkits and newsletters, and whether their knowledge and perceptions changed over the course of the year-long program. Twenty owner-occupied homes were selected from this larger group to receive full home health and energy assessments, home weatherization, and remediation of health risks, all at no cost to the homeowners.

There is more detail on our findings from these homes below, but we received quantitative and qualitative feedback from participants indicating an average reduction of energy use and a perceived increase of home health across both components of the program. It became apparent through our own interactions that lasting success requires a complex coordination of resources from multiple entities in addition to an outlet for ongoing interaction with residents, who often need to learn how to adjust their behaviors, as well as understand why it is important to do so.

CURRENT LEGISLATIVE AND PROGRAMMATIC EFFORTS IN PENNSYLVANIA

State legislation is difficult to pass because of the varied political climate in Pennsylvania, largely divided between urban and rural communities. There is some limited statewide policy for home health hazards including:

- a statewide mandate requiring disclosure of radon testing data during real estate transactions (Pennsylvania Code § 35.335a)
- civil penalties for misrepresentation of radon readings (Pennsylvania Code § 240.402)
- Senate Resolution 171, a 2002 resolution recommending the Department of Health establish a task force to investigate mold in homes and schools (Pennsylvania Legislature 2002)
- the Lead Certification Act of 1995, which requires certification and training of workers doing construction or renovation work in buildings built before 1978; this act also assigns fines and penalties to violators (Pennsylvania Legislature 1995)
- a requirement that medical laboratories report blood lead levels to the PA Department of Health (Pennsylvania Code § 27.34)
- The “Plumbing System Lead Ban and Notification Act,” a ban on the sale of leaded materials used in plumbing (Pennsylvania Legislature 1989)

Pending legislation for lead includes a call for mandated education of new parents before being discharged from the hospital, a state law adoption of federal Title X legislation for homeowner and tenant education of present lead risks, and the establishment of a superfund to remediate institutions and housing units where children are located. Recently Pennsylvania Governor Tom Wolf has called for universal blood lead testing for children under two years of age across the state.

County code does not include language for radon or mold, though water leaks, which can lead to mold, are investigated. Lead policy in the county, however, had a major win recently with the passing of universal blood lead testing for children under six years of age, which will become active on January 1, 2018. Per the health code, the County can cite landlords for lead-based paint hazards, including peeling paint, whether or not children under the age of six are living in the home.

The Allegheny County Health Department (ACHD) has been working in recent years to reduce lead risks in homes, despite the limitations on their funding. In November 2016, ACHD lowered their Elevated Blood Lead Level (EBLL) investigation threshold from 15 micrograms per deciliter ($\mu\text{g}/\text{dL}$) and above to 10 $\mu\text{g}/\text{dL}$ and above (halfway to the American Academy of Pediatrics’ recommended 5 $\mu\text{g}/\text{dL}$ and above). ACHD has also begun outreach to the group of homes with children confirmed at or above 5 $\mu\text{g}/\text{dL}$ and below 10 $\mu\text{g}/\text{dL}$, also called the “5 to 9 group.” Additionally, they have trained 10 inspectors on their team to become lead risk assessors, expanding the department’s bandwidth. Further detail on the County’s efforts can be found in the body of this report.

City legislation in Pittsburgh is influenced by our Home Rule Charter, which allows for the shift of responsibility from the state legislature to the municipality, except where specifically limited by the state. The charter makes recommendations for a strong mayoral system, City/County collaboration or consolidation of services, and advisory boards and neighborhood community groups. There is currently no city-wide policy for mold, lead, or radon. There is, however, a piece of legislation designed to require Pittsburgh rental units to be registered, the first step in creating a rental registry that discloses information about health hazards related to a specific rental unit. The measure passed but is, at the time of writing, being strongly opposed by the business community as a gross overreach.

The City makes commitments of financial support to housing initiatives, as it did in April of 2017, providing matching funds for a Department of Housing and Urban Development (HUD) grant. Pittsburgh is also visible through efforts such as the 100 Resilient Cities project, which promotes stakeholder engagement across sectors to address air and water quality, safe infrastructure, and the building of a green economy. In July of 2017, Mayor William “Bill” Peduto signed a compact with the Green and Healthy Homes Initiative, a national organization focused on breaking the link between unhealthy housing and unhealthy kids.

Not-for-profit and non-governmental organizations are involved in the effort as well to protect homeowners and renters from these health hazards: the Urban Redevelopment Authority manages an interest-free home improvement and energy efficiency loan program; Rebuilding Together Pittsburgh and Habitat for Humanity manage construction efforts for the building and renovation of homes; ACTION Housing manages the statewide Weatherization Assistance Program; CCI manages energy efficiency programs for utility companies and advocates for healthy housing; Women for a Healthy Environment advocates and runs outreach programs for healthier homes; and so on. For those organizations in the Pittsburgh area non-profit arena, there is a great deal of enthusiasm and determination around taking action to solve problems.

EXAMPLES OF SUCCESS THROUGHOUT THE COUNTRY

Our research into benchmark programs for this report included a nationwide survey of federal, state, and municipal legislation, as well as non-governmental efforts that bolstered (or stood in the place of) any existing legislation. In addition to the empirical findings from our own program, we have included a summary of research into federal, state, and local regulations supporting healthy housing initiatives. Several cities are leading the charge with innovative and effective programs, and we have provided as much detail as possible while keeping the report to 100 pages. Some of the most notable examples of effective and innovative policies and programming from around the country include:

- Universal blood lead testing (Massachusetts)
- Enhanced and targeted home inspections for homes in “high risk” areas for lead paint exposure (Cleveland, OH; Chicago, IL)
- Tracking and posting of lead testing data and remediation history for public places, such as playgrounds (Portland, OR)
- Loan assistance for Section 8 housing improvements (Burlington, VT)
- Creating a rental registry (Montgomery County, MD; Cleveland, OH; Boulder, CO; Philadelphia, PA; Chicago, IL)
- Landlord education and engagement programs (Boulder, CO)
- Mandate disclosure of health hazards at time of sale (Chicago, IL; Cleveland, OH)
- Community partner collaboration for ongoing support and education of residents (Montgomery County, MD)
- Publishing a “score card” for the City’s efforts (Portland, OR)

RECOMMENDATIONS FOR AN ENHANCED APPROACH TO HEALTHY HOMES

Combining our research on these benchmark policies, our own experience with the *Grassroots Green Homes* community outreach program, and our knowledge of the policies and initiatives in place here in the Pittsburgh region, we have constructed a set of five recommendations that will serve to protect our residents, arm homeowners and renters alike with necessary knowledge, and create a more collaborative environment for the myriad organizations devoted to creating healthy, efficient, and affordable homes in the region. Please see the recommendations section of this paper, beginning on page 89, for full detail on each of our recommendations and related strategies for success, along with examples of similar programs we have found throughout the country. The following page shows a summary of these recommendations as presented on an educational poster that will be used to support CCI’s continuing work in this area.



See the recommendations poster on the following page.

THE CASE FOR HEALTHIER HOMES: RECOMMENDATIONS FOR THE PITTSBURGH REGION



1

PROTECT CHILDREN



INVESTIGATE ALL Instances of Elevated Blood Lead Levels in Children.



DEMAND Resources for Known "Hot-Spot" Neighborhoods.



SAFEGUARD Places Where Children Gather.

2



PROTECT PEOPLE WHO RENT



ESTABLISH All Rental Units – Including Voucher-Paid Housing Units – as Healthy Homes.



CONFIRM Lead-Safe Construction and Demolition Practices are Being Followed.



ENGAGE Landlords to take a Voluntary Healthy Home Pledge.

3



DECLARE HEALTHY HOMES A PUBLIC HEALTH POLICY PRIORITY



FIX the Homes and Apartments that Pose Health Risks from Lead, Radon and Mold.



LEVERAGE Synergies Between City and County Efforts.



INVOLVE the Medical Community to Assist in Best Practices and Data Tracking.

5



GUARANTEE GOALS THROUGH MONITORING AND REPORTING



EXPAND Support to At-Risk Homes through Cross-Functional Network.



CREATE County-Wide Rental Registry on Testing, Remediation, and Compliance.



PUBLISH an Annual Healthy Homes Scorecard.

4

ARM THE PUBLIC WITH ACCESS TO INFORMATION



POST Easy-to-Navigate Home Health Data on the County Health Department Website.



BOOST Disclosure of Information at Time of Sale or Lease.



COORDINATE Ongoing Education and Support Opportunities for Residents.

EDUCATION | ADVOCACY | TECHNICAL EXPERTISE

Get the full detail on these recommendations and download the paper here: www.getenergysmarter.org/advocacy

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Bringing it Home: Recommendations for the Pittsburgh Region

It is easy to get lost in the data, facts, statistics, and strategy when it comes to home health. The wealth of information available can make even the most diligent researcher lose sight of what it means to live in a substandard home. While it is not only older buildings in less affluent neighborhoods that come with health and efficiency issues, it these homes – and the families who live in them – that tend to be disproportionately affected. People who live in dilapidated buildings where paint is peeling, carpet molding, and insulation failing during hard winters often have greater short-term concerns than long-term health risks.

For low-income homeowners, their homes are likely the largest assets they have, even if the windows are rotting away and the walls are slanting at a dangerous angle. For tenants living paycheck to paycheck, there is little recourse for dealing with an unresponsive landlord, especially if they fear retaliation for a filed complaint. The struggle to survive can be so overwhelming and stressful that there isn't enough mental energy left to think about abstract, invisible, and long-term concerns, such as indoor air quality and what implications there may be down the road. It is understandable how a parent would likely be far more concerned in the immediate moment about feeding her hungry child than protecting that child's developing brain from lead poisoning.

The graphs included below paint a picture of the current struggle for low-income communities and their rent burden. Of the roughly 300 actively engaged participants in Grassroots Green Homes, about two-thirds of them were renters, not homeowners. All four parts of Oakland in these graphs average below Pittsburgh median income. Many neighborhoods in the Hill District (bordering Uptown and Oakland, home to some GGH participants who, while not living in the target neighborhoods, were not turned away from the program) are in the lowest bracket of \$20,000 per year. Meanwhile, as of these 2014 numbers, rents have increased 15-30% in parts of Oakland, and 45% or more in the rest of Oakland and Uptown. It is likely that these residents are prioritizing short-term concerns, such as paying rent, over long-term health concerns.

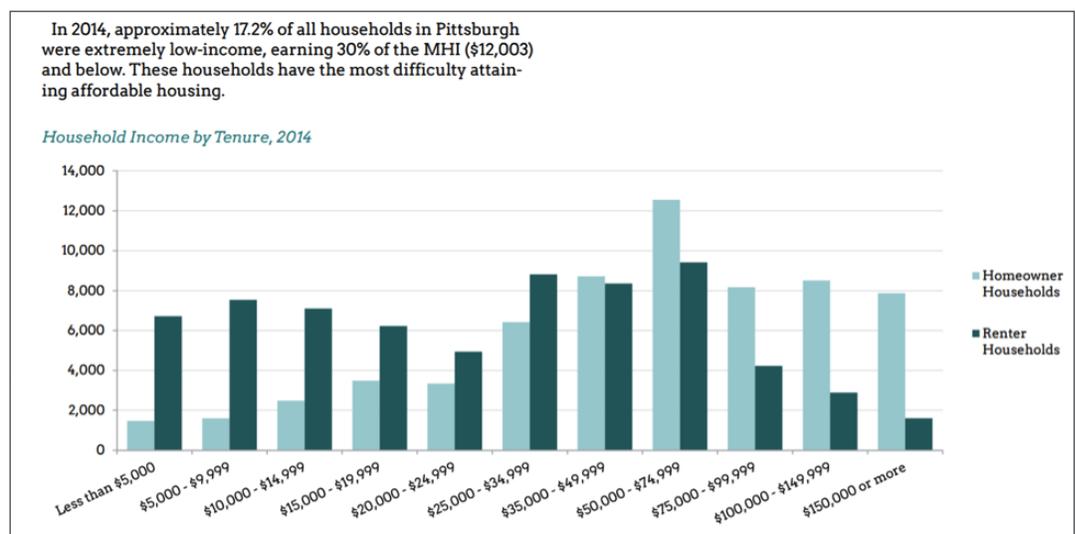


Fig. 31: Renters vs. Home owners by Income. Reprinted with permission. (City of Pittsburgh 2016)

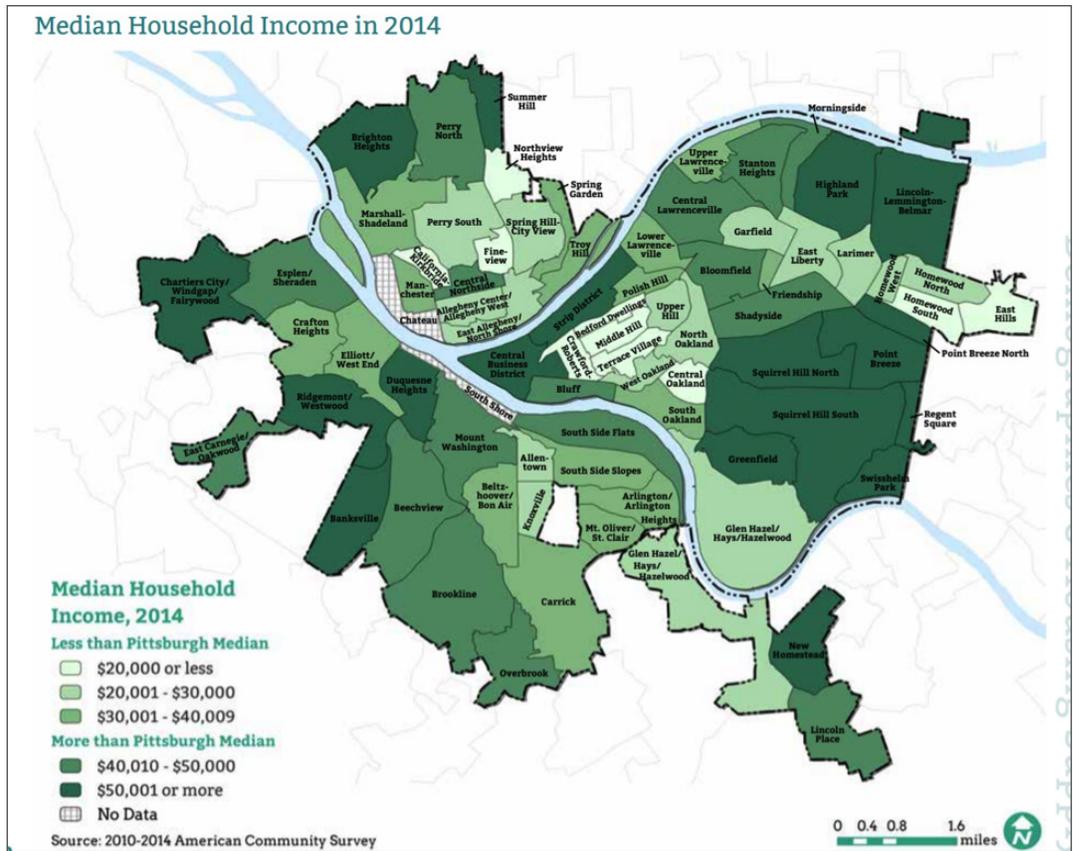


Fig. 32: Median Household Income in Pittsburgh. Reprinted with permission. (City of Pittsburgh 2016)

On the other side of the equation, we see the landlord. There are plenty of responsible landlords and property managers in Allegheny County who operate clean and affordable rental units. However, even in situations where a landlord wants to do the right thing, he may not necessarily know what the “right thing” is. In many cases – seen both in our research and here at home – the presence of health hazards in a rental unit is not necessarily because of malice or greed on the part of the landlord, but rather because of ignorance. Landlord and tenant alike may be unaware of the presence or effects of toxins such as mold, lead, or radon.

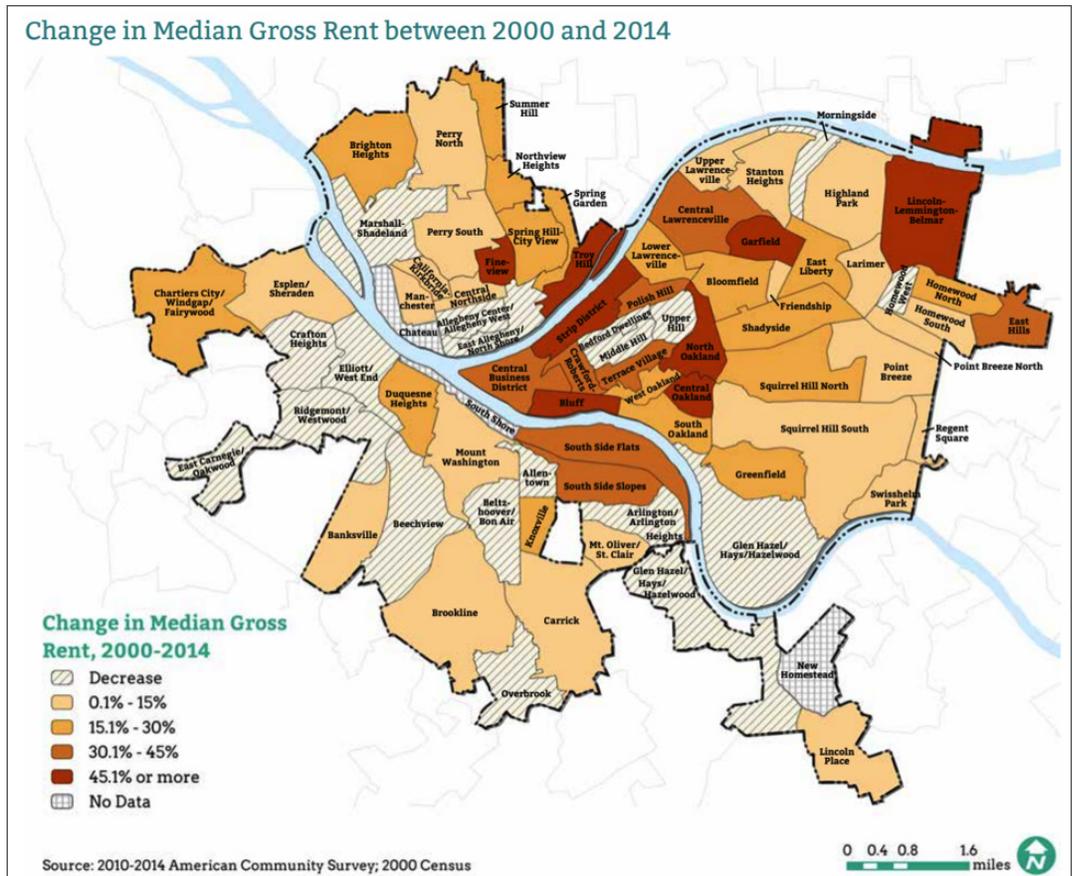


Fig. 33: Changes in median gross rent in Pittsburgh. Reprinted with permission. (City of Pittsburgh 2016)

However, even with expanded tenant education in this area, we cannot assume that tenants will necessarily feel confident enough to advocate for themselves, even if they are given the proper knowledge and resources. Landlords and tenants alike need the support of their communities and adequate investment in education, testing, and enforcement when necessary. Low-income homeowners, in particular, need adequate support to bring their buildings up to code. They need continued momentum of Pittsburgh's resurging tenants' rights movement (Krauss 2016).

Based on our research into successful policies and practices around the country, as well as past and existing efforts in Pittsburgh, we have assembled a set of recommendations that serves to safeguard the health of our residents, particularly children who are the most vulnerable to some of these hazards; to support the people who will be impacted by any changes, including homeowners, tenants, and landlords; and to ensure that the patchwork of organizations whose missions focus on these issues are working together efficiently and effectively.

1 PROTECT CHILDREN



Investigate ALL Instances of Elevated Blood Lead Levels in Children

Regardless of testing method, if a child is shown to have an elevated blood lead level, he/she is being exposed to lead somewhere, and no level of lead exposure is safe. We need to end the practice of treating elevated blood lead levels in the finger-prick (capillary) test as inconclusive. All homes, whether owner-occupied or a rental unit, should be investigated for lead risk if the child’s blood lead level shows over 10 µg/dL.

Centers for Disease Control (CDC) and American Academy of Pediatrics (AAP) guidance lists 5 µg/dL as the current reference level for blood lead, and we recommend the County Health Department expand lead investigations from cases of 10 µg/dL or greater to cases of 5 µg/dL and or greater the next five years.

On the ground:

Massachusetts	Comprehensive state legislation includes an early diagnosis program to examine all children under 6 years of age and a recording system of the children examined. (See the summary on p. 61 under “Model Legislation” of state laws for a full summary of their wide-ranging program.)
Link to Program: http://www.mass.gov/eohhs/gov/departments/dph/programs/environmental-health/exposure-topics/lead/	



Demand Resources for Known “Hot-Spot” Neighborhoods

The Health Department has already gathered data on blood lead levels for County children and cross-referenced it with housing stock condition and age. These maps information can be used to identify high-risk neighborhoods that are in need of targeted inspections, remediation, and education on lead risks and lead-safe practices in the home.

While The Health Department is utilizing the resources they currently have, they do not have enough support to cover the homes that need it. The County needs to provide additional resources that will enable the Health Department to expand lead education and investigations.

Public outcries often provide windows of opportunity for change. The Health Department’s information on testing data – sorted by municipality, school district, or legislative district – should be shared with the public in an easy-to-navigate manner in order to help garner more support for much-needed interventions.

On the ground:

Massachusetts	Comprehensive state legislation includes a provision to allow the health department director to designate emergency areas identified with high levels of lead poisoning that will receive special attention during lead inspection.
Link to program: http://www.mass.gov/eohhs/researcher/community-health/environment-health/lead/childhood-lead-poisoning-screening-and-statistics.html	
Portland, OR	The city currently runs a rental housing inspection program that targets certain sectors of the city for enhanced inspections.
Link to program: http://ophi.org/city-of-portland-rental-housing-inspections-program-hia/	



Safeguard Places Where Children Gather

Developing brains and lungs are very delicate, making children under the age of six particularly susceptible to the risks associated with poor indoor air quality and home health hazards. Lead paint dust can cause irreparable damage to IQs and cause a host of other developmental problems, including ADHD. Mold spores can exacerbate asthma or cause illness. Radon exposure over a long period of time can cause lung cancer.

There is currently a bill in the state legislature to establish a Superfund to remediate or abate schools, daycares, or any other structure deemed a significant risk to children. This bill should be supported. Furthermore, daycares and schools should be required to test for indoor air quality levels tied to mold, lead, and radon in order to procure their operating licenses. Annual inspections of schools by health officials should include checks for lead, radon, and mold. Schools and communities should be required to test playgrounds for the presence of lead and to make the test results publicly available.

On the ground:

Vermont	Daycare centers must submit a certificate of compliance with the state indicating that essential maintenance practices have been completed every year with respect to safe practices around lead paint.
Link to program: http://dcf.vermont.gov/cdd/laws-regs/childcare	

2 PROTECT PEOPLE WHO RENT



Establish All Rental Units – Including Voucher-Paid Housing Units – as Healthy Homes

In order to ensure health and safety of rental units, many cities surveyed have taken on the task of changing building codes to include language to cover health hazards, such as mold, lead, and radon. We understand that making adjustments to municipal building codes is a sizeable challenge, but a model code developed by a stakeholder group representing multiple municipalities, such as CONNECT (Congress of Neighboring Communities in Allegheny County), could frame a set of recommended changes, which would provide some consistency across municipalities.

It is important that all rental units, including affordable housing units, provide a safe environment for their tenants. Programs exist elsewhere that offer assistance in the form of loans that enable affordable housing providers to make necessary improvements to their housing units.

On the ground:

Burlington, VT	Free equipment loans and lead inspections are offered to all city residents. An interest-free loan program is available to Section 8 housing providers for the purpose of reducing lead paint hazards.
Link to program: http://www.burlingtonleadprogram.org/	
Montgomery County, MD	Montgomery County modified Department of Environmental Protection statutes defining indoor air pollutants to include dust, odor, viruses, bacteria, fungi, radon, asbestos, smoke, gas, and mold.
Link to program: https://www.montgomerycountymd.gov/green/air/indoor.html	



Confirm Lead-Safe Construction and Demolition Practices are Being Followed

Federal Title X legislation mandates real estate and residential lease disclosures for all properties built before 1978 and lead-safe renovation requirements as recently as 2010. While contractors performing construction work on pre-1978 homes are required to follow lead-safe practices, that does not always happen. The PEW Charitable Trusts and the Green and Healthy Homes Initiative (GHHI) have also recently encouraged increased enforcement of this legislation and adoption of state and local standards, respectively, to ensure a safer environment with less exposure to lead dust.

We understand that legislation and enforcement, while a step in the right direction, do not always guarantee the solution intended. Through our work with Grassroots Green Homes and partnering with other organizations that manage renovation services, we engage a large number of contractors. As an alternative to legislation, contractors engaged by home weatherization companies could be made to submit photos of the lead-safe practices being adhered to on site as part of their scope of work.

On the ground:

Texas	Texas state legislation requires photographic proof of proper remediation technique, third party verification of completion, and certification for all workers with respect to mold. Similar processes could be followed for lead, in support of Federal Title X legislation.
Link to program: https://www.dshs.texas.gov/mold/default.shtm	



Engage Landlords to take a Voluntary Healthy Home Pledge

Landlords have a prime opportunity to safeguard the health of their tenants. Cities examined in our research saw successful changes in landlord involvement tied to healthy housing testing and remediation as a result of education, rather than legislation. Joint education sessions – even barbecues – hosted for the benefit of Code Enforcement officials and landlords alike have helped landlords to see the benefit of checking and maintaining their rental units.

Other cities, such as Washington, DC have incorporated a Tenant’s Bill of Rights, which is distributed to renters upon lease signing and details items for which the landlord can be held accountable. Landlords can voluntarily ensure lead, mold, and radon checks of their rental units and provide proof of inspection to their renters. Compiling a list of landlords who opt-in to a pledge or bill of rights can help inform renters who are looking for housing.

On the ground:

Boulder County, CO	Code Enforcers in the city of Longmont have managed to reach out to property managers and create a sense of “being on the same team.” They offer trainings on indoor air quality issues that both inspectors and property owners can attend and strive to create an environment where no one is seen as an enemy.
Link to program: https://www.longmontcolorado.gov/departments/departments-a-d/community-and-neighborhood-resources/landlord-tenant/landlord-training-alliance	
Washington DC	Landlords are required to disclose lead-based paint hazards, previous mold infections, and a copy of the latest lead hazard clearance report. The “Bill of Rights” lists rights and responsibilities of tenant and landlord with respect to healthy housing and minimum standards of work practices.
Link to program: https://ota.dc.gov/publication/tenant-bill-rights	

3 **DECLARE HEALTHY HOMES A PUBLIC HEALTH POLICY PRIORITY**



Fix the Homes and Apartments that Pose Health Risks from Lead, Radon and Mold

While blood lead testing is an important indicator of child health, and universal testing is a legislative win, we need to devote more resources to primary prevention, thereby fixing the homes before they poison children. Preventative actions, such as maintenance on homes, will keep children safe in the first place, rather than using their test results as an indicator of where the problems are.

We recommend outreach and education to neighborhoods particularly at risk of lead poisoning, based on the age and condition of housing stock. The Health Department does not have enough resources to achieve these goals. Greater priority needs to be given to this public health issue by applying necessary resources to expand their team. The Health Department can also partner with Community-Based Organizations that operate in these neighborhoods for greater impact.

On the ground:

Burlington, VT	The program director for Section 8 housing developed an education and outreach program in the form of barbecues for multiple stakeholders, but specifically targeting local landlords. The lead hazard reduction component of this education focused on primary prevention.
Link to program: http://burlingtonhousing.org/	



Leverage Synergies Between City and County Efforts

In addition to demanding more resources to expand the ongoing efforts by the Health Department, we recommend the County explore ways to capitalize on the efforts of other departments within the County and in the City as well. The Health Department could empower all City and County agents who make residential visits for other purposes to assess homes for health risks such as lead paint chips or dust, visible mold, or radon. These deputy health assessors could begin the conversation about preventative maintenance, educating residents about warning signs and health risks. The Health Department has already taken steps in this area by training 10 of their inspectors in lead assessment skills.

Collaborative efforts could be guided by the CDC’s “Healthy People 2020” objectives, in which the Surgeon General listed comprehensive goals related to lead, radon, asthma provoked by indoor allergens, and enhancing surveillance of health outcomes related to home environment. These guidelines could be adopted by the City and County, similar to the 2030 District Challenge (2030 Districts 2017) or the Green and Healthy Homes Initiative compact, signed in July 2017 (Pittsburgh Post-Gazette 2017).

On the ground:

Burlington, VT	Burlington city departments have many points of synergy. Housing Authority potentiates city ordinances; Code Enforcement dovetails with public health authority; Code refers clients to the Lead Hazard Reduction Program; City ordinances potentiate the enforcement of state law; WIC has access to lead screening data and makes calls to the Housing Authority when they see a red flag; lead screening referrals are faxed to local physicians’ offices; Code Enforcement officers were put through certification classes to become lead risk assessors; and so on.
Link to program: https://www.burlingtonvt.gov/PZ/About-Us	



Involve the Medical Community to Assist in Best Practices and Data Tracking

There is an indication that the accuracy of a finger-prick (capillary) test is greatly dependent upon the technique used by the physician, so continuing education for doctors could include content such as proper testing technique, current best practices in lead poisoning prevention, and updated information on the CDC’s reference level, which has been lowered to 5 µg/dL.

With universal blood lead screenings starting at the beginning of 2018 in Allegheny County, pediatricians will have a platform for discussion with families about lead exposure and lead-safe practices in the home. Doctors will be mandated to report blood lead test results on an annual basis, but this reporting mechanism could be a great opportunity to track additional factors including whether the child lives in a private home or rental unit, if the family declined testing (and for what reason) or never scheduled an appointment, etc.

Federal guidelines provide blood lead testing and support for children under six years of age whose families are on Medicaid. These resources need to be utilized to the fullest extent possible.

On the ground:

Chicago	City-wide initiatives beyond legislation include a developing “big data” partnership to leverage academic institutions’ ability to integrate analytics into a system that would alert physicians to patients coming from potential high risk environments.
Link to program: https://dssg.uchicago.edu/project/predictive-analytics-to-prevent-lead-poisoning-in-children/	

4 ARM THE PUBLIC WITH ACCESS TO INFORMATION



Post Easy-to-Navigate Home Health Data on the County Health Department Website

Widely supported, and included among the recommendations by the recent PEW report and GHHL lead recommendations, is public access to local lead-related data. The County Health Department has posted a lot of useful information on their website tied to blood lead testing data, as well as the age and condition of housing stock (both indicators of lead paint risk). We believe the proper presentation of this information can greater increase its use to the public.

The online information already maps cases of blood lead levels equal to or greater than 10 µg/dL, but the data could be further expanded to show those at or above 5 µg/dL. Data can be displayed by communities with highest incidences of EBLL and by tracking outcomes for residents of homes investigated. Other useful statistics for residents could include:

- Total counts of finger-prick and vein-drawn blood tests for children
- Age and census tract of child’s residence
- Whether the residence is a rental unit or private home
- The number of homes touched (whether through investigations or education) by Health Department efforts per year
- Five-year Health Department plan with detailed goals.

On the ground:

Portland, OR	Concerned citizens can see registries of lead paint hazards in municipal playgrounds and actions taken to abate them. Property maps in Portland show an impeccable level of detail: owner name, address, public nuisances issued and resolution status, permits, plumbing plans, zoning, property taxes paid, nearby parks, crime statistics, assessment of FEMA hazards, information on how to report a maintenance issue, traffic counts, emergency transportation plans, and maps of water and sewer lines are carefully categorized.
Link to program: https://www.portlandmaps.com/	



Boost Disclosure of Information at Time of Sale or Lease

Potential home buyers and renters are at a disadvantage when choosing a home if they do not have access to information about the health risks present. While some disclosures are enforced at the time of sale for a house, it is less often the case for rental units. We recommend pursuing mandatory testing and disclosure of health risks such as lead paint, mold, and radon for all housing. Similar laws are already in place across the country in several states and cities included in this study.

Ideally, this information would be made available through a platform such as a rental registry or real estate listing, thereby providing easy comparisons for potential residents. Being able to provide negative test results or proof of remediation would serve as an additional selling point to the conscientious consumer and added value for the seller or landlord.

On the ground:

Cleveland, OH	City ordinance reiterates federal requirements to disclose potential lead hazards during lease or sale and distribute educational material on the health hazards of lead exposure. State level disclosure guidelines for real estate transactions require radon, lead paint, asbestos, formaldehyde foam insulation, as well as mold inspection or remediation.
Link to program: http://ohiorealtors.org/consumers/required-disclosures/	



Coordinate Ongoing Education and Support Opportunities for Residents

While informational materials are a good start, studies indicate that they do not create much of a positive impact on their own. In our own community involvement, we perceived a trend between regular contact opportunities and increased awareness on the part of the resident. In order to create a lasting impact on homes and communities experiencing these health risks, we recommend a multi-pronged approach for education and coaching.

Home health experts can collaborate with green construction firms and community-based organizations for regular resident coaching sessions; real estate firms can assist with first-time homebuyer classes; do-it-yourself construction classes at big box stores can provide information about how to ensure home projects are lead-safe; also the City, the County, and home health advocates have an opportunity to increase visibility for the issue by creating a Lead Awareness Month to raise awareness and mount a social media campaign to keep information about health risks and remediation assistance in the public eye.

On the ground:

Portland, OR	A broad coalition of tenant organizations, City departments, law centers, public health divisions, and non-profits contributed to creating a landlord-tenant handbook for distribution to area residents that clearly describes home health risks and how to prevent them. Lead, mold, and radon are featured prominently.
Link to program: https://multco.us/health/inspections-and-licensing/rental-housing	
Boulder County, CO	Homeownership classes, required for a matching down payment savings plan, includes savings, budgeting, managing debt collection interactions, getting out of debt, and investment in partnership with the Boulder Workforce program. Classes also feature robust training on a variety of housing issues including lead, radon, mold, and how to negotiate remediation of these issues during real estate transactions.
Link to program: https://bouldercolorado.gov/homeownership/how-to-apply-2	

5 GUARANTEE GOALS THROUGH REPORTING AND MONITORING



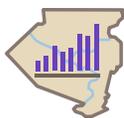
Expand Support to At-Risk Homes through Cross-Functional Network

In July 2017, the City and County signed a compact with the Green and Healthy Homes Initiative, with the goal of better coordinating outreach and remediation of area homes, and – per the GHHI mission – breaking the connection between unhealthy homes and unhealthy families. To that end, regional organizations with operations tied to home health now meet on a regular basis to share information and coordinate services to homes in need. This original group of compact signers could further collaborate on ways to expand support to the at-risk homes in our region.

Funding options are currently being explored to support the full-time coordinator role, or “Outcome Broker,” to manage this group, which is currently dependent upon volunteer time. We recommend the funding of the full-time Outcome Broker position in order to coordinate resources and services to support the health of area homes and their residents.

On the ground:

Baltimore, MD	Baltimore is the home to the Green and Healthy Homes Initiative, both as an organization and its pilot round. Nineteen cities have now signed formal compacts (Pittsburgh being the most recent, as of July 2017), with engagement ongoing in many more. This initiative is constructed around the model of coordinating services and braiding resources to improve the health of homes in a holistic manner.
Link to program: http://www.greenandhealthyhomes.org	



Create County-Wide Rental Registry on Testing, Remediation, and Compliance

At the time of this paper’s writing, the City Council’s rental registry ordinance was being contested. While we support the passing of this measure, we also recommend tasking the above-mentioned network with creating and managing an independent rental registry. Responsibilities for this group can include compiling information on the health and safety of rental units (including dates of any testing done for health hazards such as lead, mold, and radon), test results, and remediation steps taken. This level of detail will be beneficial to renters looking for healthy homes, to conscientious landlords who wish to showcase their efforts in making their rental units safe for tenants, to medical practitioners who wish to include information on high-risk areas when educating their patients, and to the County when choosing where to focus their attention for enhanced lead investigations.

On the ground:

Baltimore, MD	The city offers an easily accessible database so that prospective tenants can check if an apartment or home has a lead hazard violation that has not been fixed. This list is updated quarterly and states the exact address, zip code, date of violation, and apartment number.
Link to program: https://www.baltimorecountymd.gov/Agencies/permits/rentalregistration/reports.html	



Publish an Annual Healthy Homes Scorecard

This network of organizations could also be engaged in ongoing monitoring of the region's performance against policy recommendations contained within this paper and/or recommended by the County's Lead Task Force. Reporting on achievements and progress toward healthy homes goals happens elsewhere in the country, whether managed by a city or independent entity.

An annual report will increase visibility not only of the problems, but of the efforts being put in place to correct them, giving credit where credit is due. We see a need for transparency of plans, goals, budgets, and performance reports, all of which will result in a more educated community, increased public support behind risk abatement, and a higher profile for this crucial issue, which will hopefully result in additional funding to expand services.

On the ground:

Portland, OR	Similar to the housing information databases made available in Portland, different city bureaus all have their strategic plans, budgets, performance reports, and audits all publicly listed on their website. Citizens can track the goals their city has set and how they are measuring up and working to fulfill them.
Link to program: https://www.portlandoregon.gov/article/25147	

CONCLUSION

As we have seen, our region is the perfect storm for home health issues, such as lead, mold, and radon, because of geographic features and older housing stock. Any home, new or old, can be at risk for mold or radon, and the vast majority of the homes in the area are at risk for lead paint. Pittsburgh used to be a leader in lead action and fair housing. We have the opportunity to regain that position.

Pittsburgh and the surrounding region have a history of leadership around ensuring a healthy environment for its residents, as well as a spirit of fierce determination in the face of opposition. It is within our capabilities to combine our efforts and affect deep and lasting change for the residents of our community, made achievable both by looking forward at opportunities that lie ahead, but also by reaching back into our own past best practices.



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