I. Introduction

A. Purpose of the Guide

Home-based environmental hazards can pose significant health risks, especially in low-income, minority, and urban communities. These health problems include lead poisoning, asthma attacks and poisoning from household chemicals. People need to understand these risks in order to protect themselves and their children.

A partnership of academics, health agencies, and community groups created a model "Healthy Home" in Rochester, New York to teach people about home-based environmental health hazards. The Healthy Home is housed in a residential building in a low-income neighborhood in southwest Rochester. It provides hands-on education about common home environmental hazards, advice on low-cost solutions, and individualized referrals to resources to help address hazards.

This "Guide to Replication" was written to help groups that are interested in creating their own Healthy Home. The purpose of the guide is to provide an overview of how Rochester's Healthy Home was created including the project's goals and history, development of materials, and operation. Individuals interested in more specific information about cost estimates, logistics, or copies of printed materials are encouraged to contact the Health Home staff or visit its website at http://www2.envmed.rochester.edu/healthyhomes.html.

B. History of the Healthy Home

Several community groups in southwest Rochester began meeting in the summer of 2004 to discuss what they could do to reduce lead poisoning. These initial core partners included the Southwest Area Neighborhood Association (SWAN), a grassroots organization that provides many capacity-building services in the neighborhood with a particular focus on youth, and the Rochester Fatherhood Resource Initiative (RFRI), which had initiated a program to train underemployed men in the neighborhood to conduct lead hazard control work. These groups reached out to staff of University of Rochester's Environmental Health Sciences Center. These core partners recognized that establishing and maintaining a true partnership can be challenging. Therefore, the partners began by adopting "Principles of Collaboration" to guide their work together.

During initial meetings, the core partners decided that a practical, hands-on approach was key to educating people about home environmental health hazards. Although motivated initially by concerns about lead, the partners became aware of the national movement to integrate treatment of lead hazards with other home-based environmental hazards. This lead to the concept of a model Healthy Home that would demonstrate multiple home environmental health hazards and ways of addressing these hazards (Table 1). The Healthy Home partners aimed to educate, motivate, and support action to improve environmental health.

Table 1: Overview of Issues Addressed by the Healthy Home

Health risk	Environmental hazards	Solutions	Resources
Chemical poisoning	Pesticides, herbicides, cleaning products	Alternate cleaning products, appropriate use and storage	Cooperative Extension, Health Department
Lead poisoning	Deteriorated lead paint Lead in dust Lead in soil	Lead hazard reduction, Lead-specific cleaning	Coalition to Prevent Lead Poisoning, Health Department, City of Rochester
Asthma	Mold Indoor tobacco use Cockroaches/rodents	Leak repair, air filters, smoking cessation, integrated pest management	Rochester Community Asthma Network, Smoking cessation programs
Indoor Air Quality	Asbestos Carbon Monoxide Radon	Containment Carbon monoxide detectors Radon testing, increased airflow	Health Department Rochester Fire Department New York State Health Department, USEPA

Over the next year, the core partners met regularly to develop these goals into a concrete plan. They explored several options for physically locating the Healthy Home, including buying a building for this purpose, co-locating with an existing community center, and renting space. Meanwhile, the core partners developed a model for the types of educational displays that would be included, the kinds of information to be provided, and the issues to be addressed (Table 1). This model included information about specific health consequences of each hazard, how to address the hazard at low cost, and resources available in the community to address the hazard. The Healthy Home's target audiences were residents, property managers, and professionals. The partners established a Healthy Home Advisory Council of diverse organizations to provide technical input and assistance in reaching potential visitors (Table 2).

Table 2: Healthy Home Advisory Council members (July 2007)

Action for a Better Community
American Lung Association/Regional Community Asthma Network
Center for Environmental Information
City of Rochester (lead program)
City of Rochester Fire Department
Coalition to Prevent Lead Poisoning
Finger Lakes Lead Poisoning Prevention Center
Injury Free Coalition for Kids of Rochester
Leadership Rochester
Lenox Street Block Club
Monroe Community College Service Learning Center (Americorps)
Monroe County Department of Environmental Services
Monroe County Department of Health and Human Services Youth Bureau
Monroe County Department of Public Health
Monroe County- Work Experience Program
Neighborhood United
Neighborworks Rochester
Poison Control Center
Rochester Fatherhood Resource Initiative
Southwest Area Neighborhood Association
School #29
The Housing Council
University of Rochester Environmental Health Sciences Center
University of Rochester-Pediatric Links to the Community
University of Rochester School of Nursing

The core partners began writing grant proposals based on these plans and in December 2005 received their first grant of $15,000 in pilot project funding from the University of Rochester's Environmental Health Sciences Center. This grant enabled the group to start searching in earnest for a facility. They decided to rent space in a commercially zoned house to minimize zoning concerns. The house was large enough to accommodate tour groups and displays, but still looked like an older residential building (Figure 1).

Figure 1: Rochester's Healthy Home

C. Summary of accomplishments

In June 2006, the healthy home core partners planned an opening celebration that attracted over 80 people, including elected officials, residents, community groups, and the news media. During the summer of 2006, two medical student interns helped develop evaluation protocols and trained volunteer tour guides. This team coordinated 13 student and community volunteers who logged over 185 hours during the summer, hosted a community barbeque, and guided hundreds of visitors through the Healthy Home. In cooperation with Atrium Environmental Health and Safety Services, the Rochester Fatherhood Resource Initiative hosted seven free lead safe work practices (LSWP) courses at the Healthy Home during the summer of 2006 that trained a total of 67 contractors and property owners.

The Healthy Home received three additional grants in 2006 to support community youth-adult partnerships, refer Healthy Home visitors with asthmatic children to the Regional Community Asthma Network, and enhance outreach to the local community. With these funds, SWAN was able to hire a part time Outreach Coordinator and take over administration of the project. By May 2007, the Healthy Home had secured $150,000 in funding to cover rent and staff for the next two years.

During its first year of operation (June 2006 – May 2007), 740 people visited the Healthy Home. Most visitors came as part of one of 95 groups including the American Lung Association, the University of Rochester Urban Fellows program, the Injury Free Coalition for Kids, and local block clubs. Evaluation surveys indicated that visitors' greatest environmental health concerns were mold, household chemicals, pests, lead, and tobacco smoke. A sample of 117 visitors was contacted 3-6 months after their visit. The vast majority reported that they had taken some action to improve the environmental health of their home. For more information on visitors to the home or evaluation findings, please see the Healthy Home web site at http://www2.envmed.rochester.edu/healthyhomes.html.

D. Guide to this Guide

This Guide to Replication contains the basic information needed to replicate part or all of the Healthy Home project. The next section provides an overview of the displays and educational materials presented in the Rochester Healthy Home. The final section IV, "Your Healthy Home" addresses how these materials and approaches may be adopted in different contexts.

II. Healthy Home Displays

A. Overview

The Healthy Home focused initially on four topical areas we thought would be most important (see Table 1). Although the Healthy Home has expanded to include other issues (such as fire safety, healthy foods, etc.) over time, the focus of this guide is on those four issues: lead, asthma triggers, household chemicals, and indoor air quality. Below, the educational materials and approaches related to each of these issues are described. There is an additional section on Healthy Housekeeping, which relates to several of the issue areas.

For each issue, the Healthy Home provides information on the cause of the hazard, its health effects, solutions, and locally available resources. The Healthy Home displays on each issue are designed to reach as wide an audience as possible. For each issue, there is a highly visual poster with many photographs and easily readable text. Hands-on demonstrations of the issue are provided where possible, as well as contact information and brochures from relevant local resource groups. Most of the materials relating to each topic are clustered together in the home. For example, all the materials on asthma triggers are displayed in the “asthma bedroom” as described below. Each issue is summarized in a checklist that helps both tour guides and visitors keep track of all the relevant resources, facts, and materials.

B. Lead Hazards

Table 3: Lead Hazards Chapter Overview

1. Overview
2. Lead Hazards at the Healthy Home
   a. Posters & Checklists
   b. Sources of Lead Display
   c. Window Displays
   d. Lead Safe Work Practices Poster & Checklist
   e. Lead Safe Work Practices Display Shelf
3. Action on Lead Hazards

1. Overview

Health Effects & Strategies

Lead is a toxin that affects the brain, heart, bones, and kidneys. Lead poisoning occurs when harmful amounts of lead enter the body, usually through swallowing paint, dust, or soil that contains lead. Homes built before 1978 may contain hazardous leaded dust, paint, and soil and are the most common place where children are lead poisoned. Deteriorated leaded paint, lead in dust (which is often created by friction surfaces), lead in the soil, leaded paint chips, and unsafe home renovations that do not control lead dust contribute to lead hazards in homes built before 1978. Lead can also be found in some jewelry, toys, home remedies, ceramics, candy, or water (see Table 6. 'Sources of Lead Display').

Lead poisoning cannot be treated; it can only be prevented. Because of children's growing brains and bodies, lead poisoning has a larger impact on children than adults. Pregnant mothers can pass lead to their babies. Even low amounts of lead in children's bodies can cause learning and behavioral problems, often with no physical symptoms. Lead poisoning may result in a lower IQ, difficulty paying attention, and delinquent behavior. Public health guidelines state that a child is lead poisoned if his or her blood lead level (BLL) is 10 mg/dL or higher. However, research shows that lower levels of lead in the blood can also be harmful.

People can reduce their risk of lead poisoning by changing behavior, physical changes to the home, and contacting resources for professional help. The next section (2.'Lead Hazards at the Healthy Home') also describes the general information on lead hazards that are displayed at the Healthy Home. This includes a general poster and checklist on lead hazards, displays on the hazards and solutions, a display on other sources of lead hazards, and a display and poster on Lead Safe Work Practices.

Lead in Rochester, NY

Lead poisoning is a serious health issue in Rochester, New York. In 2006, over 500 children in the City of Rochester were lead poisoned. Lead poisoning most often occurs in older houses that are in poor condition. Most of the homes in the City of Rochester were built before 1978 which puts them at risk for lead hazards. It is safest to assume that there are lead hazards until a pre-1978 home is professionally tested.

Resources for Technical Assistance & Materials

Monroe County Department of Public Health, the Environmental Protection Agency, the Finger Lakes Lead Poisoning Prevention Center, the Coalition to Prevent Lead Poisoning, the City of Rochester, and Action for a Better Community are resources that provided technical support, handouts, or displays for this section. The City of Rochester and Action for a Better Community have programs that offer home evaluations of lead hazards and provide resources and guidance to address these problems.

2. Lead Hazards at the Healthy Home

a. Posters and Checklists

At the Healthy Home, the main focus of the Lead Hazards display is education on hazards in homes built before 1978 because those homes have the highest risk of poisoning children. All of the Lead Hazard Displays are located in a central room at the Healthy Home. There is a poster, checklist and various brochures on lead hazards. The poster describes health effects of lead poisoning, what are lead hazards, how people get lead poisoned, and solutions to address lead hazards. A checklist for visitors lists solutions to addressing lead hazards in the home as well as resources that individuals may contact for further assistance. There is also a poster, checklist and various brochures on Lead Safe Work Practices. There are brochures from organizations such as the Coalition to Prevent Lead Poisoning, Monroe County Department of Public Health, and the Environmental Protection Agency that are available in both Spanish and English. A separate display provides information on the grant programs available to city residents to provide funding for lead hazard controls. In addition, materials are available from the City of Rochester on the new local lead law and how renters can get the city to test their homes for lead (see 3. 'Action on Lead Hazards').

Table 4: Solutions to reduce lead risks

- Have your child tested for lead.
- This is especially important for children age 6 and under who live in or frequently visit pre-1978 homes.
- Your child MUST be tested at age 1 & 2.
- Get your home professionally tested for lead if it was built before 1978.
- Keep children away from porches, windows, basements, and bare soil.
- Use "Lead Safe Cleaning Techniques"
- Wash windows sills and floors weekly "Work wet" with a spray bottle & use soap and water
- Contact a Resource to borrow a HEPA vacuum.
- Wash children's hands with soap and water frequently.
- Wash children's toys with soap and water frequently.
- Have children eat foods rich in iron and calcium.
- Eliminate bare soil with a barrier like grass or thick mulch.
- Renters- talk with your property owner about addressing potential lead hazards.
- Apply for a lead hazard reduction grant from the City of Rochester.
- Use "Lead Safe Work Practices" when doing renovations on a pre-1978 home.

Table 5: Resources

General:

Monroe County Department of Public Health: 753-5087
Coalition to Prevent Lead Poisoning: 256-2267
Neighborworks: 325-4170
City of Rochester Lead Hazard Reduction Grant: contact the Housing Council or Lead Resource Center
Housing Council: 546-3700
Get the Lead Out/Action for a Better Community (Resource-HEPA): 325-7550
Rochester Fatherhood Resource Initiative (Resource-HEPA): 235-3160

City of Rochester Lead Law:

City of Rochester: 428-LEAD

Lead Safe Work Practices Training:

Cornell School of Industrial Relations: 262-4440
The Housing Council: 546-3700

b. Sources of Lead Display

Table 6: Sources of Lead Display

Common Sources of Lead in pre-1978 homes	Other Sources of Lead Hazards
Leaded Dust	Lead Glazed Ceramics
Leaded Paint	Some Jewelry
Lead in Soil	Some Pewter Figurines
	Some Mexican Candy
	Lead Soldered Plumbing
	Some Toys

The Healthy Home includes a display which highlights typical sources of lead (leaded paint, lead in soil, and lead in dust) and other less common causes of lead poisoning. These other sources are displayed at the Healthy Home in order to demonstrate the variety of items that could contain hazards levels of lead. By presenting other sources of lead in the home, visitors who do not live in pre-1978 homes learn about how their children may get exposed lead and what they can do to prevent exposure. We encourage visitors to take precaution when dealing with other sources of lead in homes. However, the tour guides emphasize that in general dust, paint, and soil present a bigger risk.

c. Window Displays

There are three full size window displays at the Healthy Home demonstrating a "hazardous" window, a window in "interim controls, and a replacement new window. Windows are a lead hazard in the vast majority of homes with a lead poisoned child. The windows were created by the Monroe County Department of Public Health and donated to the Healthy Home. These provide a highly visual and hands-on opportunity to educate visitors about lead hazards in windows. The window with lead hazards is shellacked and visitors are discouraged from touching it. Another window has interim (short-term) controls to demonstrate to visitors a low-cost method of making a window lead safe. The third window is a new window which is a long-term lead hazard control. The time and costs for the interim controls and window replacement are included as small signs on the displays.

Table 7: Window Display

Item	Descriptive Signs on Window
Hazardous Window	Window with lead hazards: - deteriorated leaded paint - leaded dust from friction surfaces - leaded paint chips - Deteriorated leaded paint may look like "alligator skin"
Interim Control Window	Window treated with interim controls for lead hazards: - jamb liners - aluminum well liner - scrape and repaint friction surfaces/paint stabilization on a non-friction surface - materials cost: ~ $30 - labor cost: ~$65 - labor time: ~ 2.5 hours
New Window	Window replacement: - cost depends on the material used and who does the work - total cost: ~ $300-$400

Figure 2: Window Displays

d. Lead Safe Work Practices Poster, Display and Checklist

Table 8: Lead Safe Work Practices

Item	Description
Poster & Checklists	- Essential maintenance practices for property owners - What are LSWP - Resources for free LSWP, code, general - Info on Free LSWP classes
Occupant & Worker Protection Equipment	- 'Protect Your Family from Lead Hazards' Booklet (EPA/HUD) - "Do not enter" sign - HEPA vac - No dry sanding - Scraper - Spray bottle - Caulk - Paint - 6 mil-poly - Tyvak suit - Gloves - Dust wipes

Lead Safe Work Practices refers to methods for doing renovations and repairs of lead hazards without exposing workers and residents to leaded dust. Lead Safe Work Practices (LSWP) are important for tenants, property owners, and contractors to learn about. This display has two posters, a checklist, brochures, and a shelf with examples of items used when doing LSWP. One poster focuses on the Essential Maintenance Practices which includes evaluating existing hazards (visual inspection & dust wipe screening), controlling (permanent, interim, cleaning, LSWP, clearance), and maintaining and monitoring controls. The second poster focuses on explaining the basics of lead safe work practices (containing the dust, using the right tools, working safely and cleaning up dust, not bringing lead home, and the lead disclosure laws), why/when people need to use them, and the equipment needed.

3. Action on Lead Hazards

The focus of the lead hazard section of the Healthy Home is to raise visitors' awareness about lead poisoning, what conditions in the home create lead hazards, and how to safely address these hazards. Visitors are also informed about Lead Safe Work Practices. Tenants and homeowners are told what they should be aware of when lead repair work is done on their homes. Contractors and landlords are told about resources and actions regarding LSWP. This includes legal aspects, tenant protection, and personal protective equipment. All visitors to the Healthy Home are informed about the effects of lead poisoning. For visitors who are concerned about lead in toys and other items in the home, recent recall information from the National Center for Healthy Housing is posted.

TABLE 9: Lead Action Tour Questions

- For parents or community members, "Do you live in a house built before 1978?" "Do you live in a house with windows that look like the hazardous one on display?" "Do you know how children get lead poisoned"
- For health care providers, "Are you aware of solutions and resources for families to address lead hazards?" "Do you know why it is important for families to know blood lead levels?"
- For landlords. "Are you aware of resources to safely address lead hazards?"
- For high school students, "Have you taken a Lead Safe Work Practices class?" "Did you know that there are free LSWP classes?" "Did you know that you can poison yourself and children in the home you're working on if you don't use LSWP?"
- For everyone "Do you know what lead poisoning is?"

The "Lead Hazard Tour" takes place in a central room in the Healthy Home which can be converted to a meeting room for the Lead Safe Work Practices courses. Healthy Housekeeping which is one of the actions people are encouraged to take to address lead hazards. Healthy Housekeeping is discussed in the Asthma Bedroom of the Healthy Home (see Chapter F. 'Healthy Housekeeping').

The tour guides are trained to tailor the tour towards individual or group needs. Parents of children (especially children age 6 and under), people who are homeowners or rent in the City of Rochester, health care providers, landlords, and contractors all need slightly different information on lead. Within each group, questions and solutions can be adapted toward actions that each person can take. If people with diverse backgrounds/experiences with lead are on the same tour, tour guides can encourage discussions among the different visitors.

As noted above, all visitors review material on the posters about what lead hazards are, how to safely address them, what conditions in the home contribute to lead poisoning, and the health effects of lead poisoning. Families of children age six and under are encouraged to get their children tested for lead (and find out specifically the blood lead level) if the children spend time in homes built before 1978. Homeowners, renters, and landlords in the City of Rochester are told about how the Lead Code affects them and what they need to do. Tours for contractors focus on the Lead Safe Work Practices, why they must use them, and how they can access free classes. Physicians and other professionals learn

how children get lead poisoned in their homes, solutions to addressing lead hazards, and where to refer patients/clients.

Follow-up Support

To support follow-up actions, visitors are given information about existing groups and resources that can give them additional help. All visitors are told about the Get the Lead Out Program, a program of Action for a Better Community which provides free lead inspections of homes for city residents that income qualify, Neighborhood Empowerment Teams (NET) which provides free lead inspections for renters in the City of Rochester, Neighborworks which is an organization that has funding opportunities, and the City of Rochester's Lead Hazard Control grants which provides funding for both homeowners and renters. There is also information on how landlords and tenants can work together to reduce risks, tenants' rights, and on free legal resources for tenants.

C. Asthma Triggers

1. Overview

Table 10:
Asthma Triggers Chapter Overview

1. Overview
2. Asthma at the Healthy Home
   a. Posters & Checklists
   b. Asthma Bedroom Display
   c. Asthma Control Table
   d. Smoking Cessation Station
   e. Mold & Moisture Display Station
3. Action on Asthma

Health Effects & Strategies

Asthma is chronic respiratory disease that affects breathing. People with asthma have sensitive airways. "Asthma triggers" such as exercise, exposure to the cold, mold, pet dander, smoke, and other particles in the air can lead to an asthma attack. Many of these triggers may be present in the home. In an asthma attack, the bronchial tubes become constricted, inflamed and filled with mucus. Symptoms of an asthma attack include trouble breathing, coughing, wheezing, and chest tightness. Asthma can lead to hospitalization or death. Although asthma cannot be cured, it can be controlled by medical management (inhalers, etc.) and by reducing the "triggers".

The next section (2. 'Asthma at the Healthy Home') describes the information on asthma triggers that are displayed at the Healthy Home. This includes a general poster and checklist on asthma triggers (smoke, dust mites, mold, pests, pets, fragrances), demonstrations of the triggers and solutions, and a display on asthma control. There are also related displays in the room such as the Smoking Cessation Station Display and Healthy Housekeeping (described in Chapter F. 'Healthy Housekeeping').

Related displays are also found in other rooms in the Healthy Home. The Mold & Moisture Display Station is found outside the bathroom and kitchen, the Integrated Pest Management (IPM) Station Display (described in Chapter E. 'Household Chemicals') is found in the kitchen, and the Furnace Display (described in Chapter D. 'Indoor Air Quality') is found in the "basement" room because connection to hazards in these rooms.

Resources for Technical Assistance & Materials

Solutions to addressing these asthma triggers include both behavior changes (such as better cleaning and not smoking) as well as physical changes to the home (such as repairs to reduce mold growth). There are local and national programs that can provide technical assistance and support. The American Lung Association is a national organization that can provide technical assistance and informational brochures. The Greater Rochester Area Tobacco Cessation Center can also provide technical support and materials related to smoking. The Regional Community Asthma Network and the Monroe County Department of Public Health have programs that will offer in-home evaluations of asthma triggers and provide resources and guidance to address these problems. These organizations also provided display items for the Asthma Bedroom and Mold & Moisture Station.

Asthma in Rochester, NY

Asthma is a huge problem in the City of Rochester, especially for children. Over 3,000 children in the Rochester City School District have been diagnosed. Asthma is a leading cause of missed school days and work throughout the United States.

2. Asthma at the Healthy Home

a. Posters and Checklists

At the Healthy Home, the main focus of the Asthma Triggers display is based around a bedroom because that is where children spend most of their time while at home and because items found in a bedroom can be asthma triggers. The Asthma Bedroom Display (See b. Asthma Bedroom Display in the next section of this chapter) is complimented by a general poster on asthma's health effects, asthma triggers, and solutions to addressing each of the asthma triggers (see Table 11 'Asthma Triggers and Solutions'). The Smoking Cessation Station and the Mold & Moisture Station also have their individual displays and handouts. Mold & Moisture is located near the bathroom since mold often grows in moist environments. A checklist handout was created and is available in the Asthma Bedroom that summarizes this information. This checklist provides solutions to addressing asthma triggers in the home as well as resources that individuals may contact for further assistance.

TABLE 11: Asthma Triggers and Solutions	
Triggers	**Solutions**
Tobacco Smoke • Hazardous secondhand smoke from cigars and cigarettes must be addressed. • See “Smoking Cessation” Section for resources to help you quit.	**Tobacco Smoke** • Quit Smoking and encourage others to quit • Do not smoke around children or pregnant women • Do not smoke in the home or car • Talk to your doctor about developing a plan to help you quit
Dust Mites • Live in household dust & often found in beds, pillows, carpets, stuffed animals, and fabrics.- need skins cells, moisture, warmth to thrive • See “Healthy Housekeeping” for resources on how to reduce dust mites in your home.	**Dust Mites** • Focus on asthmatic children’s bedrooms • Minimize fabrics and clutter • Use dust covers on beds and pillows • Use foam pillows • Keep bedding clean
Mold • Grows in damp places like the basement, bathroom, or kitchen. • See “Mold and Moisture” and “Healthy Housekeeping” for resources on safely reducing mold in your home.	**Mold** • Find & safely clean visible mold • Throw out moldy materials • Find & fix water leaks immediately • Make sure soil is sloped away from foundation of the home • Use exhaust fans or open windows to increase airflow
Pets • Create asthma triggers with their skin flakes, saliva, or urine.	**Pets** • Keep pet out of bedrooms/outside • Wash hands after touching pet • Bathe pet often • Give the pet to a new home
Pests • Mice, cockroaches or bats are attracted to food, water, and clutter. • See “Integrated Pest Management” for resources on how to safely address pest problems.	**Pests** • Safely address current pest problem • Eliminate source of food, water, and shelter • Prevent & control pests safely
Other • Other asthma triggers could include some perfumes, colognes, scented candles, hair care products, or household chemicals.	**Other** • Do not use products around asthmatics • Reduce the amount of product used • Use unscented products

b. Asthma Bedroom Display

The Asthma Bedroom Display consists of a single bed with bedding and a mattress cover, pillows with a pillow dust cover, and stuffed animals. There are shelves filled with toys and a candle. A large plastic bin filled with toys is also in the room. There is also a table with asthma control information and supplies (See c. Asthma Control Section in this chapter). A plant, candle, curtains, and a rug are also found in this room. Visitors are encouraged to investigate and discuss how these displays relate to their own homes. See Table 11 for a more detailed description of each item. Small signs are placed on each of the items listed in Table 11 explaining what they are. There are also small signs up throughout the bedroom on asthma facts.

Table 11: Asthma Bedroom Display

Item	Description
Bed with bedding, pillows, and stuffed animals	Shows that a typical bedroom and set-up can promote dust
Mattress and pillow dust covers	Shows how dust covers work to reduce dust These covers are distributed to asthmatics to reduce their exposure to dust mites in bedding. Catalogues and information about how to order dust covers are available to visitors.
Toys on a shelf, plant	Shows typical items found a in bedroom that may collect dust
Large plastic bin	Shows where to put toys to reduce clutter and dust and an empty bin so children can practice 'decluttering' by removing toys from the shelves and putting them in plastic bins
Candle	Both an asthma trigger and fire hazard
Curtains and rug	Excess fabrics that can collect dust
Small Signs	Describes display items as well as asthma facts

c. Asthma Control Table

The Asthma Control Table demonstrates tools and medicine typically given by doctors and health care providers to manage and control asthma. Although the Healthy Home focuses on reduction of asthma triggers, it is important to be in control of one's asthma and to comply with an asthma management plan. This includes a nebulizer, a quick relief inhaler, controller and reliever medication charts, a spacer chamber and children's books on asthma. Visitors who are asthmatic are encouraged to discuss their asthma plans and to identify display items that they use. See Table 13 for a more detailed description of each item. Small signs are placed on each of the items in Table 13 explaining what they are.

Many of the items in the Asthma Bedroom were donated to the Healthy Home by the Regional Community Asthma Network (RCAN). RCAN also provided some of the handouts and small signs for the Asthma Bedroom and Asthma Control Table. The Environmental Protection Agency also provided informational handouts.

Table 13: Asthma Control Table

Item	Description
Nebulizer	A device used to administer medication to people in forms of a liquid mist to the airways
Quick Relief Inhaler/Metered Dose Inhaler	Medication used to help asthmatics breathe better if they are wheezing
Peak Flow Meter	Measures the fastest rate you can blow air out of your lungs
Spacer/Holding Chamber	A device that should be used when using asthma inhaler medication in order to make sure the medication gets to the lungs
Controller Medication Chart	A chart with pictures describing different types of controller medication
Reliever Medication Chart	A chart with pictures describing different type of reliever medication
Rules of Two/Is Your Asthma in Control/Asthma Action Plan Worksheet	A checklist for asthmatics to use to determine if their asthma is in control
Children's Books on Asthma	A variety of books for children on asthma
Small Signs	Describes purpose of each display item

d. Smoking Cessation Station

Table 14: Smoking Cessation Display
Poster shows the health effects of smoking and secondhand smoke, myths vs. truths of quitting smoking, and reasons to quit smoking
Handouts provide information on free/low cost stop smoking medications
Brochures and handouts on the effects of secondhand smoke
Brochures and handouts on the effects of smoking and reasons to quit
Rat poison, formaldehyde, paint, tar, toilet bowl cleaner, lighter fluid, batteries are presented as visual examples of poisons that are also in cigarettes

The Smoking Cessation Station is also located in the Asthma Bedroom because secondhand smoke is a significant and common asthma trigger. See Table AD for more details of the items at this station. Not only can it affect asthmatics when they are in the room with smoke, but lingering smoke on clothes, furniture and the car can also trigger an attack. Also, research suggests that children of smokers are more likely to develop asthma than children of non-smokers. There are local and national resources to help be quit smoking. Visitors are encouraged to discuss issues about the effects of smoking and obstacles with quitting.

Agencies like the New York State Smoker's Quitline, Greater Rochester Area Tobacco Cessation Center, and the Smoking Health Action Coalition of Monroe County provided handouts for the Healthy Home and are also resources to help people quit smoking.

e. Mold & Moisture Display Station

Table 15: Mold & Moisture Display	
Item	**Description**
Poster & Checklists	Describes what is mold, the health effects, relationship to hazards in the home, and what to do to address mold & moisture hazards
Common types of Mold Poster	Shows the different types of common indoor mold
Mold cleaner	Shows an example of a type of mold cleaner
Moldy shoe	Shows an item where mold can grow
Dehumidifier	Shows an item where mold can grow
Handouts	Handouts- a variety on how to reduce mold and moisture in the home

Even though mold is an asthma trigger, this station is located outside the bathroom and kitchen in the Healthy Home since these rooms are sources that promote mold growth. A person's reaction to mold depends on the type of mold, how sensitive the person is to mold, and how much mold is in the home. Exposure to mold can cause asthma attacks, trouble breathing, sneezing, headaches, or a skin rash. Mold grows in areas of the home that are warm and moist so this station emphasizes the importance of reducing excess moisture in the home. This includes ongoing moisture from high humidity, leaks, or floods. This station also discusses how to safely address mold issues by getting rid of water damaged/musty/moldy materials like boxes, newspapers, or leather as well as mold-specific cleaning techniques. Other actions that people can take to reduce mold & moisture include using fans or opening windows when showering and cooking, making sure that soil around the house is sloping away from foundation, and regularly emptying and cleaning air conditioner and dehumidifier trays. Visitors are encouraged to discuss sources of moisture problems in the home and existing mold problems that they are dealing with.

Monroe County Department of Public Health, one of the Healthy Home's partners, provided the Common Types of Mold Poster, informational handouts, and is also a resource to refer people to contact to help reduce mold in the home. The New York State Department of Health also provided informational handouts.

3. Action on Asthma

TABLE 16: Asthma Action Tour Questions

- For parents or community members, "Do you or your children have asthma?" "Do they have dust covers on their pillows and mattresses?"
- For health care providers, "Do you work with children that have asthma?" "Are you aware of agencies like RCAN?"
- For landlords. "Are you aware of the damage done to home structures due to mold?"
- For high school students, "How old are the pillows in your bedroom?"
- For everyone "What do you believe that you can do to reduce asthma triggers?"

The focus of the asthma section of the Healthy Home is to raise visitors' awareness about asthma, what household conditions can make asthma worse, and how to address these hazards. Before visitors begin the tour, guides ask them about their experiences with asthma, particularly if they live with a person who has asthma. The materials on asthma are designed with families of asthmatic children in mind; however, all visitors can benefit from learning how to improve indoor air quality by reducing sources of triggers that are especially dangerous to asthmatics. The majority of the "Asthma Tour" takes place in the Asthma Bedroom. This includes the Asthma Bedroom Display, the Asthma Control Table Display, the Smoking Cessation Display, and Healthy Housekeeping (See Chapter F. Healthy Housekeeping). Other asthma triggers (Mold & Moisture, Integrated Pest Management, and Furnace Hazards) are discussed in other areas of the Healthy Home.

The tour guides are trained to tailor the tour towards the individual or group needs; this includes parents of children (especially asthmatic children), health care providers, landlords, or students in high school. Even with a diverse group, questions and solutions can be adapted toward actions that each person can take. If people with diverse backgrounds/experiences with asthma are on the same tour, tour guides encourage discussions among the different visitors. Table 16 provides examples of some questions tour guides may ask to encourage visitors to think reducing asthma triggers and improving indoor air quality in their homes.

As noted above, all visitors review material on the posters about what asthma is, how to control it, and how environmental triggers can contribute to poor indoor air quality. Families of asthmatics are reminded to follow doctor's instructions for managing asthma at the "asthma control station." The families are also encouraged to focus particularly on asthmatic children's bedrooms. All visitors are encouraged to reduce dust-collecting materials, to eliminate smoking in the home, and to adopt healthy housekeeping habits. As needed, tour guides also suggest physical changes for mold control and reducing particulates from furnaces, etc.

Follow-up Support

To support follow-up actions, visitors are given information about existing groups and resources that can give them additional help. All visitors are told about the Regional Community Asthma Network, which provides free in home education and resources for children with severe asthma.

D. Indoor Air Quality (IAQ)

1. Overview

Table 17: Indoor Air Quality (IAQ) Chapter Overview

1. Overview
2. IAQ at the Healthy Home
   a. Furnace/Filter Display
   b. Radon Display
   c. Carbon Monoxide Display
   d. Asbestos
3. Action on IAQ

Health Effects & Strategies

Indoor Air Quality (IAQ) of a home impacts people's health, especially children's, due to the amount of time spent inside the home. Indoor Air Quality also relates to Asthma Triggers (Chapter C) such as smoking and mold, Household Chemicals (Chapter E), and Healthy Housekeeping (Chapter F). This section focuses on Indoor Air Quality related to Furnaces/Filters, Radon, Carbon Monoxide, and Asbestos. The solutions are topic-specific and listed in each section.

The next section (2. IAQ at the Healthy Home) describes the information on indoor air quality displays at the Healthy Home. In the Rochester Healthy Home displays are set up in a large section to emulate hazards found in a typical bedroom. There is also a small display with household chemicals because basements often used to store chemicals (Chapter F. 'Household Chemicals'). Each topic has a separate display which includes a poster, checklist, and hands-on display items.

Resources for Technical Assistance & Materials

Monroe County Department of Public Health-Division of Indoor Air Quality donated many of the display items and provided technical assistance for these displays. Each section also lists topic-specific resources.

2. Indoor Air Quality at the Healthy Home

a. Furnace Filter Display

The furnace plays a large role in the quality of air in the home. It is important to make sure that your furnace is working properly to avoid indoor air problems such as dust, asthma triggers, and carbon monoxide. A carbon monoxide (CO) detector is also essential because you cannot smell or see if your furnace is leaking hazardous carbon monoxide. Furnace filters can cause problems if they are poor quality or do not fit correctly because hazards like dust, odors, and mold can be spread throughout the rest of the home. The different types of filters are on display in the basement room to help visitors see how filters can impact indoor air quality. Small signs are placed on each of the filters to provide information on the different types and costs. Visitors are reminded that a well maintained furnace will last longer and need fewer repairs. It will also help improve the quality of air in your home.

Table 18: Furnace Filter Display

Item	Description
Poster & Checklists	Describes how furnaces/filters can affect people's health and what to do to address hazards
Duct Tape	Can use to cover gap between furnace and filter
Dirty Furnace Filter	Shows why it is important to change filter 3 times/year
Fiberglass Furnace Filter	Least healthy choice, cost ~$1/each
Pleated Furnace Filter	Healthy choice, cost ~$5-$7/each
HEPA/Micro-Allergen Furnace filter	Healthy choice, cost ~$10/each
Small signs	Describes items as well as furnace/filter facts
Handouts	Handouts- a variety on how to reduce mold and moisture in the home

Table 19: Steps visitors can take to reduce furnace/filter hazards.

- Have a professional check the furnace at least once per year. Fall is a good time to do this.
- Change the furnace filter at least three times per year.
    - Use higher quality filters that say "HEPA" or "Micro-allergen."
    - Pleated filters also do a good job of reducing indoor air quality hazards.
    - Fiberglass furnace filters are inexpensive but do a very poor job of filtering air.
- Make sure that the furnace filter fits. If there are gaps, dust and mold in the basement can get spread into the rest of the home. This is a very common problem but it is easy to fix by using duct tape to cover up a gap.
- Consider other options such as putting cheesecloth over vents to reduce dust and particles or getting air ducts cleaned by a professional.
- The Monroe County Department of Health is a resource that visitors can contact for free in home assistance with furnace concerns.

b. Radon Display

Table 20: Radon Display	
Item	**Description**
Poster & Checklists	Describes what is radon, the health effects, relationship to hazards in the home, and what to do to address radon hazards
Radon Test Kit	Shows what people need to use in order to know if they have a radon hazard
Handouts	Handouts- a variety on radon, resources for testing, and what homeowners need to do about selling homes and testing for radon

The Radon Display at the Healthy Home focuses on what's radon, why it is a health hazard, who should be concerned about radon as a hazard in their home, and what can be done to address radon hazards. There are also small signs throughout the basement on radon facts. A radon test kit is on display with information about costs and how/where to obtain one.

Radon is a colorless, odorless, naturally occurring radioactive gas found in the soil. It is formed by the decay of uranium, which is a natural process. Radon is a health hazard that you cannot smell, see, or taste. Breathing radon does not have any short term symptoms. Long term breathing of radon can cause lung cancer.

Radon is able to enter basements of some houses through cracks in concrete walls and floors or through dirt floors. The amount of radon differs from house to house. Testing your home for radon is the only way to know what your levels are. In general, the City of Rochester does not have high levels of radon. People can test their home by getting radon testing kits from the New York State Department of Health, purchasing one at a local hardware store, or contacting a professional. Other steps people can take to address radon hazards include contacting the Monroe County Department of Public Health, minimizing time spent in the basement, and opening a basement window slightly so the furnace, dryer etc. can pull in outside air, not soil gasses.

c. Carbon Monoxide Display

Table 21: Carbon Monoxide Display	
Item	**Description**
Poster & Checklists	Describes what is carbon monoxide, the health effects, carbon monoxide hazards in the home, and what to do to address carbon monoxide hazards
Carbon Monoxide Detector	Shows what an example of a CO detector
Kerosene Space Heater	An example of a CO hazard
Small signs	Describes items and CO facts
Local News Articles	Shows local news stories of recent CO poisonings and deaths
Handouts	Describe a variety of CO hazards

The Carbon Monoxide (CO) Display focuses on examples of sources of carbon monoxide hazards in the home, and how people can detect and reduce the hazards.

The carbon monoxide detector on display provides a talking point on what everyone must have in their home to detect the odorless, colorless, toxic gas. A properly working CO detector is the only way that people can be warned about CO gas in their homes.

CO can kill you before you are even aware it is your home. Young children or the elderly are most at risk for health problems when exposed to carbon monoxide. The health effects of breathing carbon monoxide (CO) depends on age, overall health, the amount of CO, and how long you are exposed. Low amounts of exposure to CO can cause headache and fatigue. High amounts of exposure can cause hospitalization or even death.

The Healthy Home provides information on sources of CO hazards that can be found in most homes. Carbon monoxide comes from burning gas, oil, coal or wood. Carbon monoxide can become a problem if appliances are old or not working properly, letting hazardous waste gas leak into your home. Possible sources of carbon monoxide in the home include gas and oil furnaces, boilers, water heaters, and generators, wood-burning fireplaces and stoves, gas appliances like ovens, stoves, or dryers, gas and kerosene space heaters, gas and charcoal grills, and blocked chimneys and flues. The kerosene heater is an example of a source of CO. Also, the CO display is located in the Healthy Home basement because a major CO hazard is the furnace. There are also small signs up throughout the basement on indoor CO facts.

Visitors to the Healthy Home are encouraged to take steps to reduce CO hazards in their home. All visitors are encouraged to have a CO detector in their homes placed outside the bedrooms. The City of Rochester Fire Department is a useful resource because it will provide free CO detectors to residents in the City. They are also informed to make sure natural gas, oil, wood and kerosene appliances are in good condition and used correctly, such as not using a stove to heat a home. The Monroe County Department of Health- IAQ is another resource that visitors can contact for free in home assistance with CO concerns.

d. Asbestos Display

Table 22: Carbon Monoxide Display	
Item	**Description**
Poster & Checklists	Describes what is asbestos, the health effects, asbestos hazards in the home, and what to do to address asbestos hazards
Asbestos Wrapping	An example of an asbestos containing material
Asbestos Tile	An example of an asbestos containing material
Small signs	Describes display items and presents asbestos facts
Handouts	Describe a variety on asbestos hazards

The Asbestos Display at the Healthy Home focuses on identifying potential asbestos hazards in the home and the importance of contacting a professional to assess and address those hazards. Asbestos is commonly found in items in the basement such as wrapping on furnaces and pipes, but can also be found throughout the people's homes such as asbestos siding. Due to the health risks, the use of asbestos in many building materials was stopped in the mid 1970s so older homes are at a greater risk for containing asbestos materials. Asbestos that is in good condition is usually not a health hazard.

Asbestos is a naturally occurring mineral fiber that is strong, long-lasting, provides heat insulation and is resistant to fire. It is made of tiny fibers not visible to the naked eye that can float in the air for hours.

You can only tell if a material has hazardous asbestos containing material (ACM) with professional testing. Asbestos becomes a hazard to your health when it is airborne which can occur when disturbing asbestos during remodeling, repairing, or unsafe removal and old asbestos that is deteriorated, crumbly (friable) asbestos.

Asbestos can cause health problems if it is breathed or swallowed over time, and fibers are so small that they are able to travel deep into the lungs. Asbestos fibers do not dissolve in the body. The fibers may stay in the body and cause health problems years later. There are no short-term symptoms from asbestos exposure. Long-term effects can include lung or other cancers.

Asbestos can only be identified and handled by professionals so visitors are encouraged to contact the Monroe County Department of Public Health- IAQ and not address the hazards themselves. Solutions also include leaving the suspected asbestos containing material alone, contacting a professional company, or sealing the material so fibers are contained.

3. Action on Indoor Air Quality

The focus of the IAQ section and "basement" displays of the Healthy Home is to raise visitors' awareness of indoor air quality hazards in their home, conditions that create the hazards, the health effects, and how to address the hazards. Because these hazards can occur in most homes, the materials and displays provide information that is useful to most visitors including medical professionals, landlords, and families.

TABLE 23: IAQ Tour Questions

- For everyone-
- "Do you have a CO detector- do you know where you can get one for free if you live in the City?"
- "Do you know where you should put the CO detector?"
- "How often do you change your furnace filter?"
- "Do you have any possible areas in your home that could contain asbestos?"
- "Do you live in an area that could have radon hazards?"
- "Did you know that the County will come to you home for free to assess IAQ problems?"

The "Indoor Air Quality Tour" takes place in the "basement" room of the Healthy Home because the furnace, asbestos, radon, and carbon monoxide hazards are found in basements. Table 23 provides examples of some questions tour guides may ask to encourage visitors to think about improving indoor air quality in their homes.

Follow-up Support

To support follow-up actions, visitors are given information about existing groups and resources that can give them additional help. All visitors are told about the Monroe County Department of Public Health- Indoor Air Quality Division which provides free in-home assessments of potential hazards. The City of Rochester Fire Department provides free carbon monoxide detectors and smoke detectors.

E. Household Chemicals

1. Overview

Table 24: Household Chemicals Chapter Overview

1. Overview
2. Household Chemicals at the Healthy Home
- **a. Posters & Checklists**
- **b. Household Chemicals Display**
- **c. Integrated Pest Management Display**
- **d. Alternative Cleaners Display**

3. Action on Household Chemicals

Health Effects & Solutions

Many cleaning products, pesticides, medicines and other household chemicals are toxic and could be harmful to your and your children's health. Children are at the highest risk of being poisoned by household chemicals. Almost half of homes with a child under 5 have hazardous pesticides stored within reach of children and in 2000, nearly 20,000 children were exposed to or poisoned by bleach according to the National Poison Control Center.

Household chemicals include cleaning products, personal products like hair care and nail polish remover, paint, pesticides, and medicine. Short and long term health effects depend on toxicity and exposure. Short term effects include headaches, dizziness, and death. Long term effects include harm to a child's growing body, cancer, and death. Solutions to addressing household chemical hazards include using chemicals safely and storing chemicals safely.

The next section (2. Household Chemicals at the Healthy Home) describes information on household chemical hazards that are displayed at the Healthy Home. The Household Chemical Display is in the kitchen of the Healthy Home because the kitchen often contains many hazardous chemicals. There is also a small display in the 'basement' of the Healthy Home with chemicals because the basement is also a room that often contains hazardous chemicals. The bathroom and garage are also rooms in the house that are likely to contain household chemicals. This kitchen display includes a general poster and checklist on household chemical hazards, displays on the hazards, and displays examples of solutions. There are also related displays in the kitchen such as the Integrated Pest Management Display and Alternative Cleaners Display.

Resources for Technical Assistance & Materials

There are local and national programs that can provide technical assistance and support. The Poison Control Center provided brochures and display items like the "Look-a-like" display. The Monroe County Department of Public Health and Cornell Cooperative Extension provided brochures and technical assistance for the Household Chemical Display, Integrated Pest Management Display, and the Alternative Cleaners Display. The Environmental Protection Agency also provided brochures and posters that are on display.

2. Household Chemicals at the Healthy Home

a. Posters and Checklists

At the Healthy Home, the main focus of the Household Chemicals Display is based around a kitchen because that is one of the most common areas for the chemicals to be used and stored. The Household Chemical Display (see Table 25 'Household Chemical Display') is complimented by a general poster on household chemicals and their health effects, types of chemicals, and solutions to addressing these hazards. The Integrated Pest Management and Alternative Cleaners displays also have individual posters, displays, and handouts. The solutions are summarized in Table 25. A checklist was also created and is available in the kitchen to give to visitors. This checklist provides solutions to addressing household chemical hazards in the home as well as resources that individuals may contact for further assistance.

Table 25: Household Chemical Solutions

Use Chemicals Safely	Store Chemicals Safely
Read the label on the household chemical carefully.	Store household chemicals, including cleaning products. bleach, pesticides, medicines, automotive products, and paint out of the reach of children- use a locked cabinet if possible.
Locate what is in the product, emergency numbers and what to do if there is an accidental poisoning.	Never leave household chemicals out.
Only use the amount of product stated on the directions.	Store all products in their original container.
Wear rubber gloves and use other protective equipment as stated on the directions.	Keep "look alike" products stored separately.
Before using a household chemical, remove children, toys, and pets from the area.	Safely dispose of old or leftover products you do not use. Bring old household chemicals to the Monroe County Hazardous Waste Program. Do not pour leftover household chemicals in the storm drain.
Keep the room aired out while you are cleaning. Use an exhaust fan, open a window, or open a door.	Clean out your cabinets and safely dispose of products you don't use.
Don't mix different household chemicals. Ammonia and bleach products create a toxic gas if mixed.	Remember that children can be accidentally poisoned if medicine or other personal products are not stored safely. Do not leave medicine out on tables or bedroom dressers. Store medicines up high and out of the reach of children.
Do not eat, drink, or smoke when using these chemicals, and be sure to wash your hands when you are done.	
Use safer alternatives like baking soda or borax.	

b. Household Chemicals Display

The Household Chemical Display consists of a kitchen cabinet and countertop as well as a sink. This shows a typical kitchen that visitors are encouraged to investigate and discuss how the display relates to their own home. The shelves have examples of household chemicals and stored in a cabinet with a lock. The "look-a-like" display shows examples of items like window cleaner, blue mouthwash, and a blue drink. Various types of cabinet locks provide an example ways to store chemicals safely. See Table 26 for a more detailed description of each item. Small signs are placed on each of these items explaining what they are. There are also small signs up throughout the kitchen on household chemical facts.

Table 26: Household Chemicals Display

Item	Description
Poster & Checklists	Describes types of household chemicals, where they may be located, the health effects, and what to do to address mold & moisture hazards
Look-a-like Display	Shows items that look similar and why they should be stored separately
Cabinet Locks	Shows examples of how to store chemicals safely
Household Chemicals (emptied and cleaned)	Shows typical chemicals, where they may be found, and why the chemical and location are hazardous
Small signs	Describes display items as well as household chemical facts
Handouts	Handouts- a variety on household chemicals

c. Integrated Pest Management (IMP) Display

Table 27: Household Chemicals Display	
Item	**Description**
Poster & Checklists	Describes what is IMP and how to do IMP
Pesticides	An example of a hazardous household chemical
Boric Acid	An example of a 'safer' alternative pesticide
Sticky Trap	Shows an example of an alternative pesticide
Steel Wool, Caulk	Teaches how to safely keep pests out of the home
Plastic Food Containers	Shows how to safely store food and reduce a pest attractor
Small Signs	Describes display items as well as pesticide facts

Many people have pests in their home such as mice, cockroaches, ants, and bats. The Integrated Pest Management (IPM) Display is also located in the kitchen because it is a safer alternative to many of the household chemical pesticides. See Table 27 for more details of items at this station. IPM focuses on safer ways to address pest problems in people's homes. This includes identifying the type of pest, where it is hiding in the home, safely addressing the pest, and getting rid of the pest's food, water, and shelter. Then, people need to prevent future pest problems. This includes continuing to get rid of food, water, and shelter. People also need to do repairs to prevent future problems and working with property owners to safely keep pests out. Pesticide alternatives are also highlighted at this station. These include snap traps, glue traps, and boric acid. In its last year, the Healthy Home also added a display on safely addressing lice and bed bug issues. Cornell Cooperative Extension and the Monroe County Department of Public Health are resources to learn more about IPM.

d. Alternative Cleaners Display

Table 28: Household Chemicals Display	
Item	**Description**
Poster & Checklists	Describes items used to make alternative cleaners
Baking Soda	Shows an example of an alternative cleaner
Vinegar	Shows an example of an alternative cleaner
Borax	Shows an example of an alternative cleaner
Handouts	Handouts- a variety on how to make alternative cleaners

As explained above, chemicals used in your home could be hazardous to your health and your children's health. Many of these chemicals are also harmful to the environment. Using Healthy Housekeeping practices may reduce the need for household chemicals. When using chemicals, consider using safer alternatives in order to help keep your family and the environment safe. Safer alternatives must still be kept out of reach of children. Just because they are "safer" than the usual household chemicals, it does not mean that they are "safe" for children to handle. See Table 28 for examples of items used in alternative cleaners. Although all cleaners are displayed in the "kitchen." Visitors are cautioned that the effectiveness of these products in reducing lead hazards.

3. Action on Household Chemicals

The focus of the household chemicals section of the Healthy Home is to raise visitors' awareness about types of household chemicals, why they can be hazardous, and how to address these hazards. Before visitors begin this section of the tour, guides ask them about where they store household chemicals in their home.

TABLE 29: Household Chemicals Tour Questions

- "Where do you store household chemicals?"
- "Do you ever store chemicals in not their original containers?"
- "Do you have chemicals stored where children can reach them?"
- "Do you know how to contact the Poison Control Center?"
- "Do you use pesticides in your home?"

The "Household Chemical Tour" takes place in the kitchen. The focus includes the Household Chemical Display and Integrated Pest Management Display. Information on Alternative Cleaners is also presented.

The tour guides are trained to tailor the tour towards the individual or group needs; this includes parents of children, health care providers, landlords, or students in high school. Even with a diverse group, questions and solutions can be adapted toward actions that each person can take. If people with diverse backgrounds/experiences are on the same tour, tour guides can encourage discussions among the different visitors.

Follow-up Support

As noted above, all visitors review material on the posters about types of household chemical, their health effects, and solutions such as storing and using chemicals safely. Many solutions related to household chemicals are behavioral changes that people need to take as well as housekeeping changes such as storage.

F. Healthy Housekeeping

1. Overview

Table 30: Healthy Housekeeping Chapter Overview

1. Overview
2. Healthy Housekeeping at the Healthy Home
a. Poster, Checklist, and Display
3. Action on Healthy Housekeeping

Visitors learn about Healthy Housekeeping at the Healthy Home because it relates to many of the issues discussed such as Asthma Triggers, Lead Hazards, and Household Chemicals. The next section describes the information on Healthy Housekeeping. Household Chemicals also has information on safer cleaning alternatives. This includes a general poster and checklist, display items, and brochures.

2. Healthy Housekeeping at the Healthy Home

a. Poster, Checklist, and Display

The poster and checklist at the Healthy Housekeeping Station focuses on cleaning well, safely, and often. The display includes items and information on how to protect yourself and others when cleaning. See Table 31 for examples of the items and methods. 'Working wet' is a cleaning method which involves spraying an area, like a window sill, with water in order to reduce spreading dust in the air. This is helpful for asthmatics because it reduces the amount of airborne dust exposure as well as minimizes spreading leaded dust. The 'two bucket' cleaning method is when a person has one bucket with clean, soapy water and the second bucket is filled with rinse water. This is used to maximize the effectiveness of cleaning leaded-dust on the floor because of the second rinse water bucket.

Table 31: Healthy Housekeeping Display

Item	Description
Poster & Checklists	Describes healthy housekeeping practices and resources
Handouts	Handouts- a variety on how to do healthy housekeeping
Cleanser	Example of what is needed to address dust hazards
Detergent	Another example of what is needed to address dust hazards
Gloves & goggles	Shows personal protective equipment
Hand soap	Shows what children and adults need to use when washing
Spray bottle	Shows what is needed to 'work wet'
Mop and 2 buckets	Shows items needed for 'two-bucket' cleaning
Small Signs	Describes display items as well as healthy housekeeping facts

3. Action on Healthy Housekeeping

TABLE 31: Healthy Housekeeping Tour Questions
• "Did you know that you and your kids could get sick from how you clean your home?" • "What steps do you take to protect yourself and/or your kids when you're cleaning?" • "Did you know that you can cut down on your cleaning by just reducing the amount of clutter in your home? • "Who reads the label/directions on the cleaners that you use—and follows them?"

The focus of the 'Healthy Housekeeping Tour' is to raise visitors' awareness of steps that are necessary to reduce hazards in home through housekeeping techniques. Because these actions are necessary in most homes, the materials and displays provide information that is useful to most visitors including medical professionals, landlords, and families. Healthy Housekeeping Actions are meant to give visitors steps that they can incorporate into their cleaning routines that will keep them healthier (having good air flow/ventilation in the room when cleaning), their children healthier (frequent washing of bedding to reduce dust mites), and utilize cleaning products in the most efficient manner (use the amount listed on the directions).

The "Healthy Housekeeping Tour" takes place in the 'Asthma Room' of the Healthy Home because many of these hazards relate to asthma triggers. Visitors are encouraged to talk about the different items on display in relation to their own housekeeping habits. Table Y provides examples of some questions tour guides may ask to encourage visitors to think resources and improving cleaning practices in their homes.

Follow-up Support

To support follow-up actions, visitors are given information about steps they can take in their own home to make their housekeeping healthier.

III. Beyond Environmental Health

The Healthy Home has expanded beyond the original environmental hazards - lead hazards, asthma triggers, indoor air quality, household chemicals, and healthy housekeeping. Some topics were added to the Healthy Home during the initial set-up and review of the Healthy Home before it opened to visitors. The City of Rochester Fire Department initially visited the Healthy Home in order to review the carbon monoxide display. They suggested that we also include some information about fire safety and provided brochures and a poster to display at the Healthy Home. The Injury Free Coalition for Kids was initially involved with the Healthy Home to provide information on household chemical poisonings. The Injury Free Coalition for Kids expanded on this and provided information on unintentional injuries for the entire house and also donated a crib and display on items that people can buy to address unintentional injuries (stove knob covers, safety gates) for the Healthy Home. Information on tenant and landlord rights and responsibilities was added to the Healthy Home because in order to address many of the hazards covered it requires the tenant and property owner to work together.

The nutrition and food safety displays were added after the Healthy Home opened. Various members of the Healthy Home Core Team were interested in including information on nutrition because of the natural extension from the kitchen display. This is an initiative that has spun off into many different directions which includes creating displays on serving sizes and the food pyramid, food sanitation, and workshops with students on eating healthy. Through the nutrition initiative, a survey of access to nutritional foods was conducted in the SouthWest area in Rochester. Also, the nutrition initiative at the Healthy Home is helping to support a larger initiative that is growing in the City of Rochester.

Table 32: Beyond Environmental Health

Health Risk	Information Covered	Resource
Fires	The need for smoke detectors, home evacuation plan, & fire extinguisher.	City of Rochester Fire Department
Unintentional Injuries	Items to use or how to set up homes to prevent falls, burns, poisonings. Information on crib, car seat, and helmet safety.	Injury Free Coalition for Kids The Poison Control Center
Tenant/Property Owner Relationships	Rights and responsibilities for landlords and tenants such as maintaining a property in lead-safe condition and preventing excess wear & tear to the property.	The Housing Council Neighborhood Empowerment Teams Monroe County Legal Assistance Corporation
Nutrition/Food Safety	Information on serving sizes, the food pyramid, and food sanitation.	Foodlink Cornell Cooperative Extension Monroe County Dept of Public Health

IV. "Your Healthy Home"

While the Healthy Home has been very successful in Southwest Rochester, a similar model may not be a good fit for other communities. The Rochester Healthy Home was designed in response to a particular community's identified needs and the resources of the core partners.

Even if this specific model is not appropriate, however, other communities may adapt the lessons learned from the Healthy Home to their particular contexts. For example, instead of renting space, hands-on displays on home environmental health could be placed in a community group's offices, or located in a church, hospital, or training site. Or, the Healthy Home concept could be applied in a remodeling project with documentation and display of initial conditions, hazard treatment methods, and outcomes. Other communities might choose to emphasize different topics or audiences to reflect their particular interests, resources, and needs.

The key factors that contributed to the Rochester Healthy Home's success -- partnership, hands-on approach, and focus on action -- could be integrated into any of these various approaches. Broad partnerships that span health and housing interests and can be created among existing groups. A hands-on approach can be adopted, whether through physical demonstration of hazard treatments or portable displays of materials, photographs of actual hazards, and descriptions of low-cost treatments. Finally, action can be promoted by providing individualized strategies, contact information for resources, and follow-up on actions needed to address home-based environmental hazards. Thus, depending on key issues, funding, skills, and other resources, the lessons of the Rochester Healthy Home can be adapted by other groups to create a model that works for their community.