

The In-Home Asthma Trigger Intervention Model (IHAT)

ASSESS, TARGET, AND REDUCE TRIGGERS TO IMPROVE IAQ AND ASTHMA OUTCOMES
CLEARCORPS DETROIT

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Using the IHAT Model to Assess and Reduce Asthma Triggers

- The IHAT is designed to assess for In-Home Asthma Triggers, and to assist in pinpointing potential improvements to help reduce in-home asthma triggers and improve IAQ
- Use the IHAT to help create a Family Action Plan to help the client make improvements to reduce in-home asthma triggers
- Involve the client in the IHAT to help get the best answers. Certain inspection-based questions may be best to do on your own.
- Conduct an IHAT as both an initial assessment, and then reconduct it as a follow up assessment to document improvements in in-home asthma triggers due to intervention.
- A reduced IHAT score indicates improvement. You can calculate improvements as a percentage for documentation and reports.

Creating the Family Action Plan

- Create a Family Action Plan (FAP) with recommended improvements for the client.
- **Certain in-home asthma triggers are house-based, such as leaks. Certain triggers, however, are client-based, such as smoking, hygiene, and spray and cleaner use. How you address these client-based triggers will depend on your relationship to the client.**
- Focus areas for improvement on IHAT questions and sections where the client scored high.
- Use the Suggestion Library to help create the FAP.

Providing Resources

- If possible, provide resources for areas needing improvement.
- The resources that are available will differ depending on your program.
- When no resources are available, attempt to provide an educational resource.
- Update Available Resources Library as new programs become available.

Adapting the IHAT

- The IHAT can be adapted to meet your program needs
- This may result in the need to raise or lower the total possible IHAT score.

In-Home Asthma Trigger Assessment (IHAT)

Client Name: _____

Address: _____

Date: _____

Total IHAT Score:

A. Scented Products

1. Do you use scented air sprays?

a. **0** – Not at All / **1** – Once Per Month / **2** – Once per week / **3** – Once Per Day / **4** – More than once per day

2. Do you burn candles?

a. **0** – Not at All / **1** – Once Per Month / **2** – Once per week / **3** – Once Per Day / **4** – More than once per day

3. Do you use automatic air fresheners?

a. **0** – Not at All / **1** – Once Per Month / **2** – Once per week / **3** – Once Per Day / **4** – More than once per day

4. Do you use strong cleaning products that smell?

a. **0** – Not at All / **1** – Once Per Month / **2** – Once per week / **3** – Once Per Day / **4** – More than once per day

5. Do you clean using bleach?

a. **0** – Not at All / **1** – Once Per Month / **2** – Once per week / **3** – Once Per Day / **4** – More than once per day

Section A Score: (_____)

B. Smoke and Incense

1. Does anyone smoke inside?

a. **0** – Not at All / **1** – Once Per Month / **2** – Once per week / **3** – Once Per Day / **4** – More than once per day

2. Does anyone smoke outside?

a. **0** – Not at All / **1** – Once Per Month / **2** – Once per week / **3** – Once Per Day / **4** – More than once per day

3. Do people who smoke outside wear a smoking jacket?

a. **0** – No one smokes / **1** – Always / **2** – Mostly / **3** – Sometimes / **4** – Never

4. Does anyone burn incense?

a. **0** – Not at All / **1** – Once Per Month / **2** – Once per week / **3** – Once Per Day / **4** – More than once per day

Section B Score: (_____)

C. Ventilation

1. How is your bathroom vented?

- a. 0 – Exhaust fan / 2 – Window opens but no fan / 4 – Window does not open

2. How is your kitchen vented?

- a. 0 – Exhaust fan and carbon filter / 2 – carbon filter and window / 3 – window only / 4 – No window opens

3. Is your dryer vented properly to the outside?

- a. 0 – Properly vented / 2 – Vent present with damage / 4 – dryer exhausts into house

Section C Score: ()

D. Heating and Cooling

1. Does your heating system work well?

- a. 0 – furnace properly heats all rooms / 2 – furnace inadequate or unreliable / 4 – furnace damaged or broken

2. Do you have any air conditioning?

- a. 0 – Central A/C Present / 1 – window A/C present / 2 – Windows open only / 4 – Windows do not open

Section D Score: ()

E. Pest Prevention

1. Do you have mice present?

- a. 0 – No Mice in last six months / 2 – occasional mouse / 4 – multiple mice present, evidence observed.

2. Do you have cockroaches present?

- a. 0 – No roaches in the last six months / 2 – an occasional roach spotted / 4 – multiple roaches present

3. Are there areas for pest entry like gaps or cracks in walls?

- a. 0 – No areas for pest entry / 2 – some gaps or cracks / 4 – obvious areas for pest entry

4. How easy are your floors and countertops to clean?

- a. 0 – Very Easy / 1 – somewhat easy / 2 – somewhat difficult / 4 – Very difficult

5. Is your trash can covered with a lid?

- a. 0 – Yes, trash can has lid / 2 – trash can has no lid / 4 – no trash can present

6. How often is food left out of sealed containers?

- a. 0 – never; food always stored sealed / 2 – sometimes; storage is difficult / 4 – often; not enough storage

Section E Score: ()

F. Dust Control

1. How much carpeting do you have in your house?

- a. 0 – No carpeting present / 1 – a little carpeting / 2 – about half is carpet / 4 – house is mostly carpet

2. Do you have adequate water supply?

- a. 0 – All sinks work fine / 2 – some but not all sinks work fine / 3 – Most sinks do not work / 4 – no water

3. Do you possess functional mop, buckets, cleaning solution, and paper towels to make cleaning easy?

- a. 0 – yes I have those supplies / 2 – Kind of; I have some of them / 4 – Not really; I need more supplies

4. Do you have a functional vacuum cleaner with a good filter?

- a. 0 – Yes / 2 – Kind of, but it blows some dust and doesn't really work well / 4 – No vacuum present

5. Do you use dust mite proof mattress and pillow covers (encasements)?

- a. 0 – Yes I use both / 2 – sometimes; I'm not sure / 4 – Never; my child's bedding is a trigger

6. How clean is your furnace filter?

- a. 0 – filter less than three months old or boiler / 2 – filter present but old/dirty / 4 – no filter or no filter slot

Section F Score: (_____)

G. Leaks and Mold

1. Does your roof leak?

- a. 0 – Roof is intact / 1 – one minor leak / 3 – multiple leaks / 4 – bad leaks or leaks over bedroom

2. Do you have any pipe or drain leaks?

- a. 0 – No leaks / 1 – one leak / 2 – two leaks / 3 – three leaks / 4 – four leaks or bad leak

3. Do you have any visible mold or mildew?

- a. 0 – no mold / 1 – mold in shower only / 2 – mold on bathroom walls only / 4 – multiple locations/bad

4. Are your gutters intact and functional?

- a. 0 – gutters are intact / 2 – minimal damage/full of debris / 4 – damaged, missing, or nonfunctional

5. Are your downspouts extended away from the foundation?

- a. 0 – drainage is proper / 1 – most are extended but not all / 2 – most are unextended / 4 – downspout damage

6. Does water ever backup into your basement?

- a. 0 – no, never / 1 – once, but I fixed it / 2 – sometimes, with clean water / 4 – yes, with dirty water

Section G Score: (_____)

H. Pets

1. Do you have a pet with fur or dander present?

a. 0 – No furry pets / 1 – outside pets only / 2 – pet present but known non-allergic / 4 – furry pet present

2. Does this pet have direct access to the asthmatic child’s bedroom?

a. 0 – Pet is kept out of bedroom / 2 – Pet sometimes in child’s bedroom / 4 – pet in child’s bedroom and bed

Section H Score: ()

I. Symptom Control

Note: Do NOT make any medical recommendations unless you are qualified to do so. Refer client to their doctor.

1. Does your child have a controller medication?

a. 0 – Yes OR PCP documented NA / 2 – Yes but we don’t use it / 2 – Yes but it’s out / 4 – No.

2. Does your child have a spacer chamber for their inhaler?

a. 0 – Yes OR PCP documented NA / 2 – Yes but we only use it sometimes / 3 – Yes but we don’t use it / 4 – No.

3. Does your child have a nebulizer mouthpiece?

0 – Yes OR PCP documented NA / 2 – Yes but we only use it sometimes / 3 – Yes but we don’t use it / 4 – No

4. Does your child have a current Asthma Action Plan (AAP)?

a. 0 – Yes OR PCP documented NA / 2 – Yes but it’s really old / 2 – I gave it to my doctor but I don’t have it / 4 – No.

5. Has your child had an allergy test done?

a. 0 – Yes OR PCP documented NA / 2 – Yes but it’s really old / 2 – Yes but I don’t know what it says / 4 – No.

6. Does your child have direct access to their rescue medication at school?

a. 0 – Yes it’s in the classroom or on person / 2 – At school but in the office or locked away / 4 – No.

Section I Score: ()

Total Score: / 164 (Zero is a perfect score)

0-20 Great!	20-40 Good	40-80 Fair	80-120 Needs Improvement	120-164 Really Needs Improvement
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In-Home Asthma Trigger Assessment (IHAT)

Family Action Plan



Client Name: _____ Child Name: _____

Address: _____ Date: _____

Your Current Score: ____ / My Score Goal: 40 / % Improvement needed to meet goal: ____

Date Done	Asthma Trigger	Suggestion
Symptom Control Recommendations		
CHAP Recommendations		

Agency Actions		
Resources Available to Help		

I agree to try and do these goals to help make my home asthma friendly.

Client Signature

Date

Agency Signature

Date

Family Action Plan Intervention Suggestion Library

Asthma Trigger	Suggestion
Section A: Scented and Cleaning Products	
Use of Scented Air Sprays and candles	Do not put chemicals into the air. Do not use air sprays or burn candles because these are asthma triggers. Use asthma friendly alternatives like baking soda and simmering cinnamon sticks and cloves. See: <i>Green Cleaning Products</i> sheet.
Use of strong cleaning products and bleach	Cleaning products that smell, have strong chemicals, and bleach are asthma triggers. Use asthma-friendly products like Free and Clear dish soap, Simple Green, Murphy's Oil, vinegar, and baking soda.
Section B: Smoke and Incense	
Smoking inside	Smoking inside is a major asthma trigger. Other asthma improvements will not be possible if there is smoking inside the house. Smoke outside only with doors and windows closed and wear a smoking jacket. Talk to your doctor to try and quit. Medicaid covers this.
Smoking outside	You can bring smoke inside on your clothes and it is an asthma trigger. Wear a "smoking jacket" (a coat you use only when smoking) that you take off before entering the home. When smoking outside close windows and doors. Do not smoke in enclosed porches.
Burning Incense	Burning incense is worse than cigarette smoke and is a major asthma trigger. Use asthma friendly alternatives. See: <i>Green Cleaning Products</i> sheet.
Section C: Ventilation	
Bathroom is unvented	Crack a window <u>and</u> leave the door open slightly when showering to allow mold-causing humidity to escape. Leave the window open for 15 minutes after showing to allow the humidity to clear. Humidity also causes dust mites, which is an asthma trigger.
Bathroom has a vent fan	Let your bathroom exhaust fan run for 15 minutes after showering with the door open to allow all of the humidity to escape.

Kitchen is unvented	Crack your kitchen window when using the oven or boiling a lot of water.
Dryer is unvented	Install a dryer vent to vent dryer gas and humidity to the outside. Basic dryer vents cost about \$10. Make sure you cut your dryer vent to fit so that it is as short as possible. Clean your dryer vent for flammable lint at least once per year.
Dryer vent is dirty or clogged	Disconnect your dryer vent and clean it for flammable lint with a vacuum or with a broom handle.
Dryer vent is damaged	If your dryer vent is damaged, seal holes with duct tape. If possible, install a new vent. Basic dryer vents cost about \$10. Make sure you cut your dryer vent to fit so that it is as short as possible. Clean your dryer vent for flammable lint at least once per year.
Section D: Heating and Cooling	
Air Seal Doors	If you see light or feel air coming through a doorway, you can air seal it to keep the cold out. With the door closed, install screw-on door sweep and door jamb weatherstripping kits, about \$30 total. Adhesive weatherstripping does not work. Caution: assume old paint around doors contains lead. Follow <i>Lead Poisoning 101: How to work lead safe practices.</i>
Get your furnace Tested and Tuned	Getting your furnace tuned up each year will help it work well through the winter. There may be programs that can help.
Seal your ductwork	Seal any seams and gaps in your ductwork with duct tape. You can also use caulk. <i>Caution:</i> White, papier mâché wrap on ductwork could be asbestos and is dangerous. Do not touch.
Section E: Pests	
Areas for mouse entry.	Look outside around doors and on your foundation and seal any small gaps or cracks with copper wool and caulk. Mice only need a hole the size of a dime to get into your house.
Mice present in home.	Seal all food in airtight plastic containers. Clean your dishes right after eating. Set mouse traps using peanut butter and check them regularly. Do <u>not</u> use sprays or poisons.

Roaches present in home	Roaches need water. Stop all leaks. Clean thoroughly. A single drop of grease can feed 20 roaches for life. Seal all food in airtight plastic containers. Clean your dishes right after eating. Set roach baits (plastic traps) in bathroom and kitchen. Roach baits should have a “birth control” feature. Do <u>not</u> use sprays or poisons. Keep your children and pets away from roach baits.
Trash can exposed or no trash can	Exposed trash can attract pests which are asthma triggers. If possible, use a trash can with a lid. Use trash bags inside of the can.
Exposed food	Exposed food can attract pests which are asthma triggers. Keep all food in sealed plastic storage containers. Clean dishes after eating.
Section F: Dust Control	
Carpeting throughout house	Old carpeting can be a major asthma trigger because it traps dust and chemicals and is tough to clean. Sprinkle baking soda and work into carpeting. Vacuum with a HEPA vacuum. Vacuum regularly to remove dust and dust mites. Do not smoke or use sprays to help keep carpeting clean.
Old carpeting present	<p>Consider removing your carpeting to expose the hard floor underneath. <i>Caution:</i> old carpeting can contain dangerous dust like lead dust.</p> <ol style="list-style-type: none"> 1. Vacuum carpeting well 2. Mist water over carpeting to keep dust down 3. Protect yourself with a respirator rated P-100. Keep children away. 4. Carefully remove the carpet by rolling it, misting as you go. Take rolled carpet outside and seal with duct tape. 5. Remove all carpet staples and tacks. 6. Wet clean very well after you remove the carpeting. <p><i>Note:</i> Make sure you know what is underneath your carpeting before you remove it. Test it in a corner to see.</p>
Wet cleaning materials	<p>Basic wet cleaning materials should cost around \$20. You will need:</p> <ul style="list-style-type: none"> • Rinse water bucket with wringer • Clean solution water bucket

	<ul style="list-style-type: none"> • Mop • Spray bottle • Soapy cleaning solution w/o strong chemicals or odors • Paper towels <p>If possible, maintain these supplies at all times. Wet clean weekly to reduce dust and dust mites and to prevent pests. Ask if there are programs that can help.</p>
Vacuum Cleaner spreads dust	<p>Many vacuum cleaners spread more dust than they clean.</p> <ul style="list-style-type: none"> • Only use a HEPA-rated vacuum cleaner • Check and clean or change the filters and bags regularly • If possible, use a bagged vacuum instead of a bagless vacuum. • Carefully dispose of canister debris or full bag into a plastic grocery bag away from children and outside if possible. <p>Wet cleaning may be better than a dusty vacuum.</p>
Mattress and bedding are an asthma trigger	<p>Lots of dust and dust mites live on mattresses and bedding</p> <ul style="list-style-type: none"> • Wash bedding regularly, including pillows. • Use hypo-allergenic mattress and pillow encasements (covers) <ul style="list-style-type: none"> ○ These covers should be labeled to protect against dust mites. <p>Clean the encasements as you would your sheets.</p>
Change your furnace filter	<p>Change your furnace filter at least every three months. Furnace filters say what they filter on the packaging. Get one that filters at least dust and pollen.</p>

Section G: Leaks and Mold

Mold Present	<p>Mold will keep coming back until you stop the moisture source like humidity or a pipe leak. Stop leaks first.</p> <p><u>Clean Mold</u></p> <ol style="list-style-type: none"> 1. Stop leak if possible. 2. Protect yourself with a P-100 respirator rated for mold 3. Clean mold with a soapy solution and warm water
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	<p>4. Do not use bleach</p> <p>5. Paint with a mold-killing primer from your hardware store.</p>
Pipe Leaks Present	If possible, stop leaks as soon as you know about them. Leaks can lead to other problems like mold and roaches. Ask if there are programs that can help.
Roof leak present	Roof leaks are tough to pay for. If you can, safely stop your roof leak. Ask if there are programs that can help.
Downspouts go into foundation	Extend your downspouts with a downspout extender four feet from your foundation. This will help keep water out of your basement and help prevent mold growth.
Water back up in basement	Have your basement main floor drain snaked once per year. Safely clean up standing water in your basement as soon as possible to prevent mold growth. Disconnect your downspouts from your storm drain if still connected. Extend downspouts four feet from foundation.
Gutters are clogged	Clean your gutters once per year of leaves and other debris. This will help your house clear water away.
Section H: Pets	
Furry pet in home	Get an allergy test done for your child where they see the doctor. Determine if your child is allergic to your pet. If they are allergic, separate the child from the pet or consider finding the pet a new home.
Furry pet in child's bedroom	Have your child's bedroom be a "pet free zone". Keep your child's bedroom door closed so your pet does not have access. Keep your pet off of your child's bed.
Furry pet is allergen	Groom your pet regularly to reduce dander and fur. Keep pet outside when possible. Clean shed fur regularly with a HEPA-rated vacuum.
Section I: Symptom Control	
No Controller Med	Talk with your doctor if a controller med would be appropriate for your child.
Controller Med is ineffective	If your child still has asthma symptoms, ask your doctor if a different dosage or a different controller med might help.

No Spacer Chamber	Talk with your doctor if a spacer chamber would be appropriate for your child.
Doesn't always use spacer chamber	Ask your doctor if you should always use your spacer chamber with your child's inhalers. Spacers can give a fuller medicine dosage.
No Nebulizer Mouthpiece	Talk with your doctor if a nebulizer mouthpiece would be appropriate for your child.
Doesn't always use nebulizer mouthpiece	Ask your doctor if you should always use a mouthpiece with your child's nebulizer instead of the facemask. Mouthpieces can give a fuller medicine dosage. Children must be mature enough to use a mouthpiece.
No Asthma Action Plan	Work with your doctor to create an effective Asthma Action Plan (AAP) for your child.
No Allergy Test	Ask your doctor if an allergy test would be appropriate for your child.
Very old allergy test or unknown results	Ask your doctor to review your child's allergy test so you understand all of the results. Ask your doctor if you should get a new allergy test done.
Hasn't seen an Asthma Specialist	Ask your doctor if a referral to an Asthma Specialist would be appropriate for your child.
Indirect access to rescue med at school	Talk with your child's teacher and principal so that your child has direct access to their rescue medication while at school. Rescue medication in the office or with the nurse should be in the child's classroom or on their person.
Rescue Medication is not at school	Talk with your child's teacher so that your child has direct access to their rescue medication while at school. Rescue medication should be in the child's classroom or on their person.

Agency Actions Library	
Healthy Homes Products	Agency will provide HH products including new HEPA vacuum, furnace filters, and mattress and pillow encasements.
Perform IPM	Agency will seal for obvious pest entry and set asthma friendly pest traps.
Air sealing	Agency will perform basic air sealing around doors and on ductwork.
Carpet Cleaning	Agency will order asthma-friendly carpet cleaning.
Duct Cleaning	Agency will order asthma-friendly duct cleaning.

Resources Available to Help Library	
Asthma Education	Wayne CHAP Wchap.org / 313-863-2427
Asthma Resources	Asthma Initiative of Michigan GetAsthmaHelp.org
Windows, Lead Poisoning	Lead Safe Home Program Michigan.gov/leadsafe / 313-924-4000
Roofs, General Repairs	Zero Interest Loan Program DetroitHomeLoans.org
Furnace Test and Tune	CLEARCorps Detroit CLEARCorpsDetroit.org / 313-924-4000
Utility Assistance	Low Income Self Sufficiency Plan LiveUnitedSEM.org / LSP Call: 844.598.7967
Water Assistance	WRAP Program WayneMetro.org/WRAP / 313-386-9727
Refrigerator Replacement	Refrigerator Replacement Program CLEARCorpsDetroit.org / 313-924-4000
Property Tax Assistance	Property Tax Exemption and Reduce Interest Plans UCHCDetroit.org / 313-963-3310
Weatherization	Insulation and Air Sealing WayneMetro.org / 313-388-9799