

1 Hour Session and Learning Collaborative

Environmental Triggers and Second Hand Smoke

December 10, 2020

12:00pm-1:00pm

1:00pm-1:30pm (LC Participants)

**Learning Collaborative
Participants Please remain on the
WebEx following presentation**



OneCare Vermont

onecarevt.org



WebEx Details

Please use Mozilla's Firefox or Google's Chrome to access the WebEx application. If you do not have one of these browsers installed, you will need to download one of them.

1. Open FireFox or Google Chrome
2. Enter: www.webex.com or click link:
<https://onecarevt.webex.com/onecarevt/j.php?MTID=mad058547f9edf5227f09974e81844359>
3. Click on "Join" in the upper right hand corner
4. Enter Meeting Number: 172 113 2786
5. Enter Meeting Password: OCVT
6. Enter Your Name and Enter Your Email Address
7. Call 1-415-655-0001 & 172 113 2786



Monitoring Form

Date: 12/10/2020

Title of Program: OneCare Vermont – Environmental Triggers and Second Hand Smoke

Where: via WebEx

Please list speaker/moderator:

Norman Ward, MD; Laura Capps, Emerging Technologies and Services Manager, Efficiency Vermont & Sarah Cosgrove, RCP, MTTs, AE-C, Community Health

Please list all planning committee members:

Norman Ward, MD; Susan Shane, MD; Jennifer Gordon, LICSW; Emily Martin, RN; Tawnya Safer, BS

Purpose Statement/Goal of this activity: Provide up to date information on environmental triggers and second hand smoke.

Learning objectives (do not use “understand”):

1. Outline environmental triggers to assess for in patients with chronic respiratory disease.
2. Recognize what a healthy home is for those with chronic respiratory disease.
3. Identify assessment tools and community resources available.

Does the speaker or any of the planners have anything to disclose? ☐Yes ☒No

If yes, please list all potential conflicts of interest: If yes, were the potential conflicts resolved: ☐Yes ☒No

Did this activity receive any commercial support (grants or in-kind)? ☐Yes ☒No

If yes, please list all organizations and support type:

In support of improving patient care, The Robert Larner College of Medicine at The University of Vermont is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

The University of Vermont designates this live activity for a maximum of 1AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This program has been reviewed and is acceptable for up to 1 Nursing Contact Hours.

As a Jointly Accredited Organization, The Robert Larner College of Medicine at the University of Vermont is approved to offer social work continuing education by the Association of Social Work Boards (ASWB) Approved Continuing Education (ACE) program. Organizations, not individual courses, are approved under this program. State and provincial regulatory boards have the final authority to determine whether an individual course may be accepted for continuing education credit. The University of Vermont maintains responsibility for this course. Social workers completing this course receive 1 continuing education credits.

This activity was planned by and for the healthcare team, and learners will receive 1Interprofessional Continuing Education (IPCE) credit for learning and change.



Important Reminder:

All WebEx Participants will be muted during this session. During the Q&A portion you will be unmuted or you may use the chat box for that portion of the session.



Welcome

Norman Ward, MD
Chief Medical Officer

Agenda

| | Presenter | Time |
|---------------------|--|------------|
| Noon- 12:05pm | Norman Ward, MD Chief Medical Officer, OneCare Vermont Introduction & Session Logistics | 5 Minutes |
| 12:15pm- 12:45pm | Laura Capps, Emerging Technologies and Services Manager, Efficiency Vermont & Sarah Cosgrove, RCP, MTTs, AE-C, Community Health | 40 Minutes |
| 12:45pm- 1:00pm | Q&A | 15 Minutes |

Presenter Bio(s)

Laura Capps

Laura facilitates the identification and qualification of new disruptive technologies and services for Efficiency Vermont's future programs. Her current projects include healthy homes, healthy buildings, and managing the research and development portfolio. Most recently, Laura wrote Vermont's Healthy Homes Playbook and co-wrote the Energy-Plus-Health national playbook. Laura holds degrees in sustainable development and building construction from Appalachian State and Georgia Tech respectively, and numerous industry certifications and awards.

Sarah Cosgrove, RCP, CTTS-M, AE-C

Sarah is the CHT Education Coordinator for the Community Health Team at Rutland Regional Medical Center. Sarah is a licensed Respiratory Therapist, Health Coach, certified master level Tobacco Treatment Specialist and certified Asthma Educator. In these roles, Sarah has conducted training and provided mentoring for Tobacco treatment specialists and Asthma Educators over the past 12 years. She is also the Regional Coordinator for Tobacco Cessation services in the Rutland hospital service area where she works in the community, 1:1 and with groups. Sarah is a University of Massachusetts certified trainer for Tobacco Treatment specialists working with the VT department of Vermont as a content expert. She assisted in the development of Vermont training for the American Cancer Society's Fresh start Tobacco cessation groups, conducting trainings across the state. In addition, Sarah also works as the Asthma educator as part of the In Home Visiting Asthma program providing individualized education to patients with asthma and identifying environmental triggers in the home.



Session Goal & Learning Objectives

Session Goal:

Session Learning Objectives:

1. Outline environmental triggers to assess for in patients with chronic respiratory disease.
2. Recognize what a healthy home is for those with chronic respiratory disease.
3. Identify assessment tools and community resources available.



Accreditation Designation Statement

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December 11, 2020

Noontime Knowledge

Asthma & COPD Learning - Environmental Triggers

Sarah Cosgrove, RCP, CTTS-M, AE-C, Rutland Regional Medical Center

Laura Capps, BPI BA & HHE, CEM, MS, Efficiency Vermont

Learning Objectives

- 1. Outline environmental triggers to assess for in patients with chronic respiratory disease.**
- 2. Recognize what a healthy home is for those with chronic respiratory disease.**
- 3. Identify assessment tools and community resources available.**

Agenda

- **Setting the stage – 5 min**
- **What is a healthy home? – 25 min**
 - Identifying signs and making improvements
- **Micro spaces and chemicals, screening questions – 10 min**
- **Q&A – 15-20 min**



What is a healthy home?

Efficiency
Vermont

- 1. Why the home environment matters**
- 2. Defining healthy home**
- 3. Signs of an unhealthy home**
- 4. Resources for home improvement**

Why our homes matter



Defining a healthy home



**KEEP IT
CLEAN**



**KEEP IT
DRY**



**KEEP IT
PEST-FREE**



**KEEP IT
CONTAMINANT-
FREE**



**KEEP IT
SAFE**



**KEEP IT
VENTILATED**



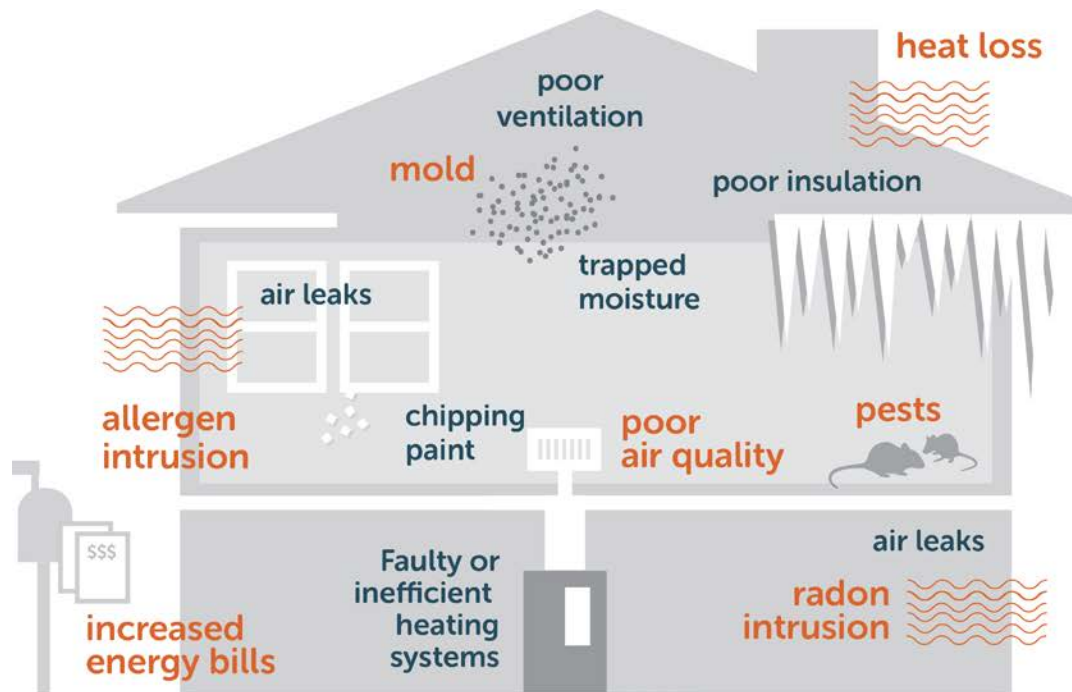
**KEEP IT
COMFORTABLE**



**KEEP IT
MAINTAINED**

Graphic source: BPI.org

Signs of an unhealthy home



Chronic Asthma



Mental Stress



Chronic Chill



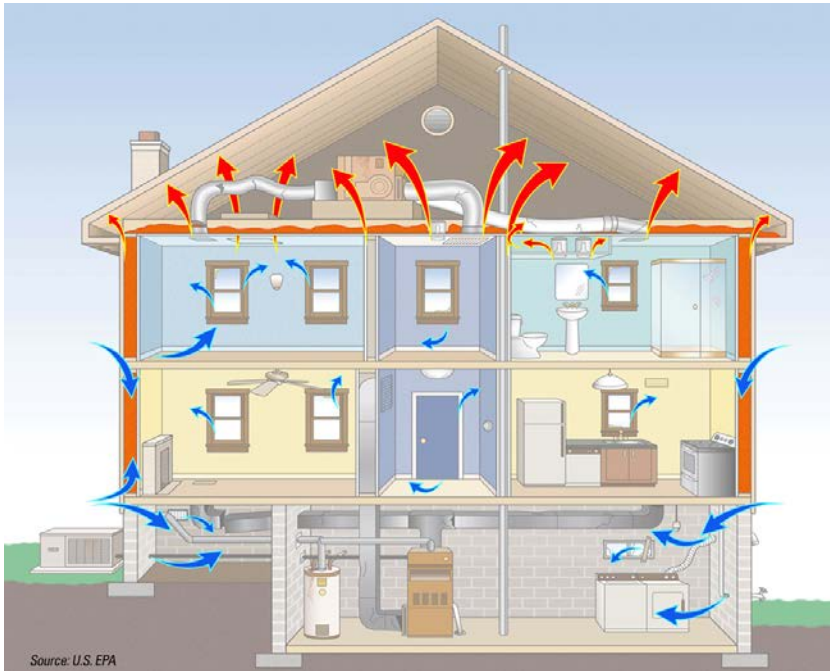
Increased Emergency Dept. Visits



Increased Incidents of Illness



This Photo by Unknown Author
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Quantifying air quality

YOUR INDOOR AIR QUALITY REPORT

Efficiency
Vermont

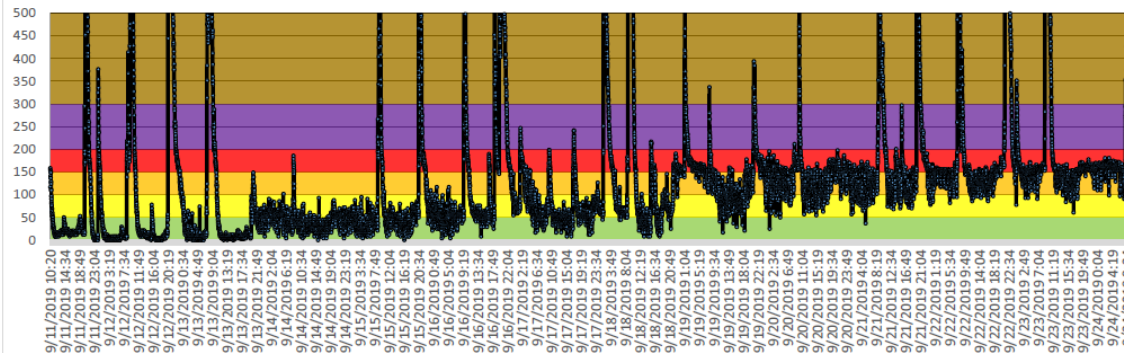
Name: Sample

Address:

Start Date/Time: 9/11/19 10:20

End Date/Time: 9/24/19 10:56

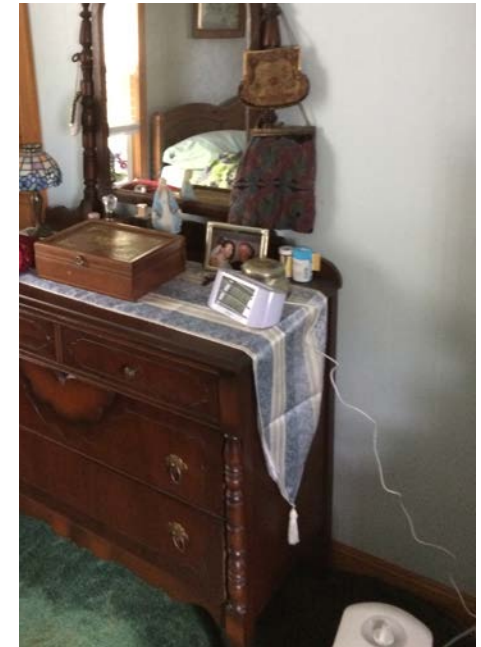
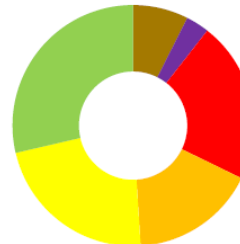
Particulate Matter



| Particulate Matter | | Percent of Time |
|--------------------------------|-----------|-----------------|
| Hazardous | 301+ | 7.5% |
| Very unhealthy | 201 - 300 | 3.1% |
| Unhealthy | 151 - 200 | 21.6% |
| Unhealthy for sensitive groups | 101 - 150 | 16.8% |
| Moderate | 51 - 100 | 22.4% |
| Good | 0-50 | 28.6% |

Particulate Matter - Percent of Time

- Hazardous
- Very unhealthy
- Unhealthy
- Unhealthy for sensitive groups
- Moderate
- Good





**1.
Remove**

**2.
Separate**

**3.
Ventilate**

4. Filter



**1.
Remove**

**2.
Separate**

**3.
Ventilate**

4. Filter





**1.
Remove**

**2.
Separate**

**3.
Ventilate**

4. Filter



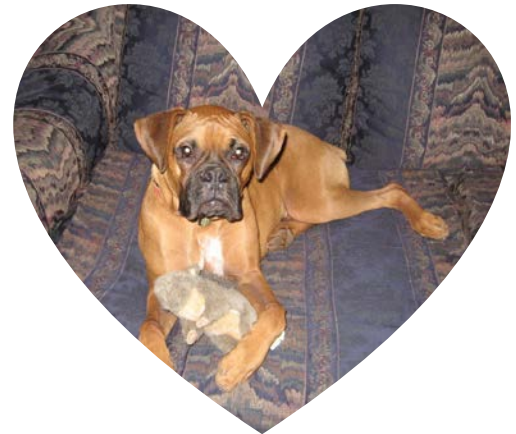


**1.
Remove**

**2.
Separate**

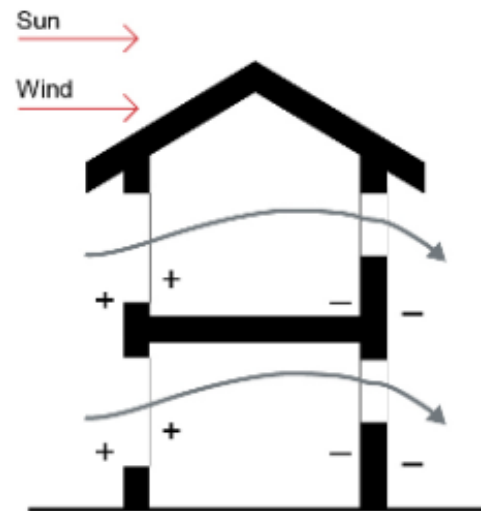
**3.
Ventilate**

4. Filter





Thermal Ventilation



Cross Ventilation

Image source: Auckland Design Manual



**1.
Remove**

**2.
Separate**

**3.
Ventilate**

4. Filter



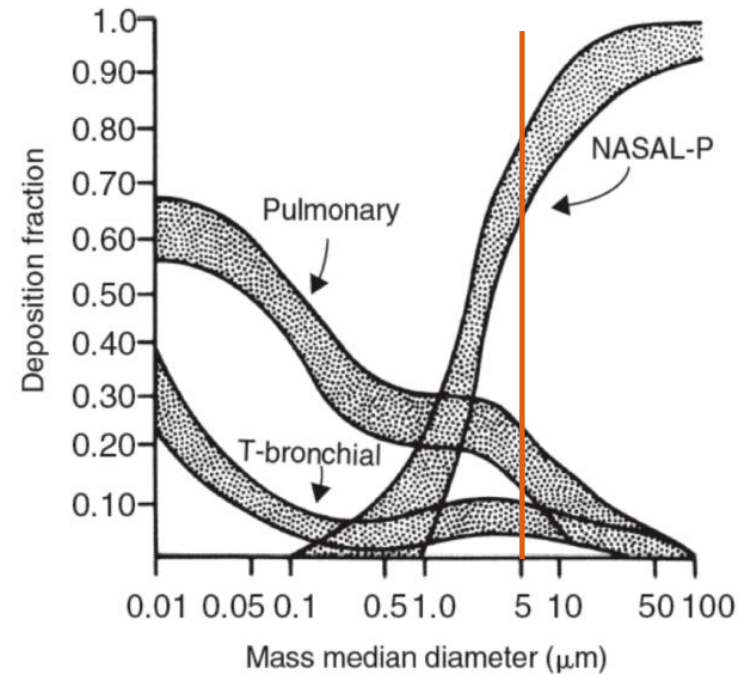
| MERV Rating | Air Filter will trap Air Particles size .3 to 1.0 microns | Air Filter will trap Air Particles size 1.0 to 3.0 microns | Air Filter will trap Air Particles size 3 to 10 microns | Filter Type ~ Removes These Particles |
|-------------|---|--|---|--|
| MERV 1 | < 20% | < 20% | < 20% | Fiberglass & Aluminum Mesh ~ Pollen, Dust Mites, Spray Paint, Carpet Fibres |
| MERV 2 | < 20% | < 20% | < 20% | |
| MERV 3 | < 20% | < 20% | < 20% | |
| MERV 4 | < 20% | < 20% | < 20% | |
| MERV 5 | < 20% | < 20% | 20% - 34% | Cheap Disposable Filters ~ Mold Spores, Cooking Dusts, Hair Spray, Furniture Polish |
| MERV 6 | < 20% | < 20% | 35% - 49% | |
| MERV 7 | < 20% | < 20% | 50% - 69% | |
| MERV 8 | < 20% | < 20% | 70% - 85% | Better Home Box Filters ~ Lead Dust, Flour, Auto Fumes, Welding Fumes |
| MERV 9 | < 20% | Less than 50% | 85% or Better | |
| MERV10 | < 20% | 50% to 64% | 85% or Better | Superior Commercial Filters ~ Bacteria, Smoke, Sneezes |
| MERV 11 | < 20% | 65% - 79% | 85% or Better | |
| MERV 12 | < 20% | 80% - 90% | 90% or Better | |
| MERV 13 | Less than 75% | 90% or Better | 90% or Better | |
| MERV 14 | 75% - 84% | 90% or Better | 90% or Better | HEPA & ULPA ~ Viruses, Carbon Dust, <.30 pm |
| MERV 15 | 85% - 94% | 95% or Better | 90% or Better | |
| MERV 16 | 95% or Better | 95% or Better | 90% or Better | |
| MERV 17 | 99.97% | 99% or Better | 99% or Better | |
| MERV 18 | 99.997% | 99% or Better | 99% or Better | |
| MERV 19 | 99.9997% | 99% or Better | 99% or Better | |
| MERV 20 | 99.99997% | 99% or Better | 99% or Better | |

Illustration Provided by LakeAir / www.lakeair.com

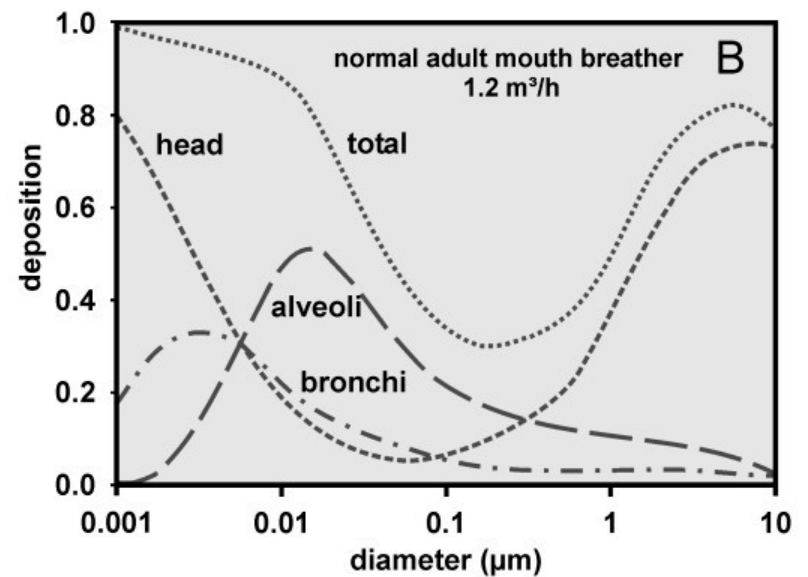
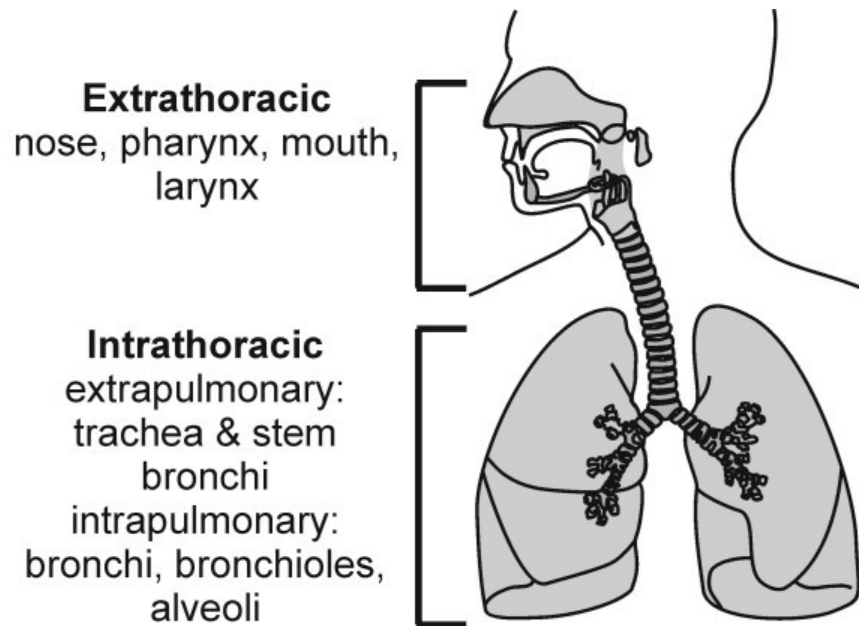
Particle size

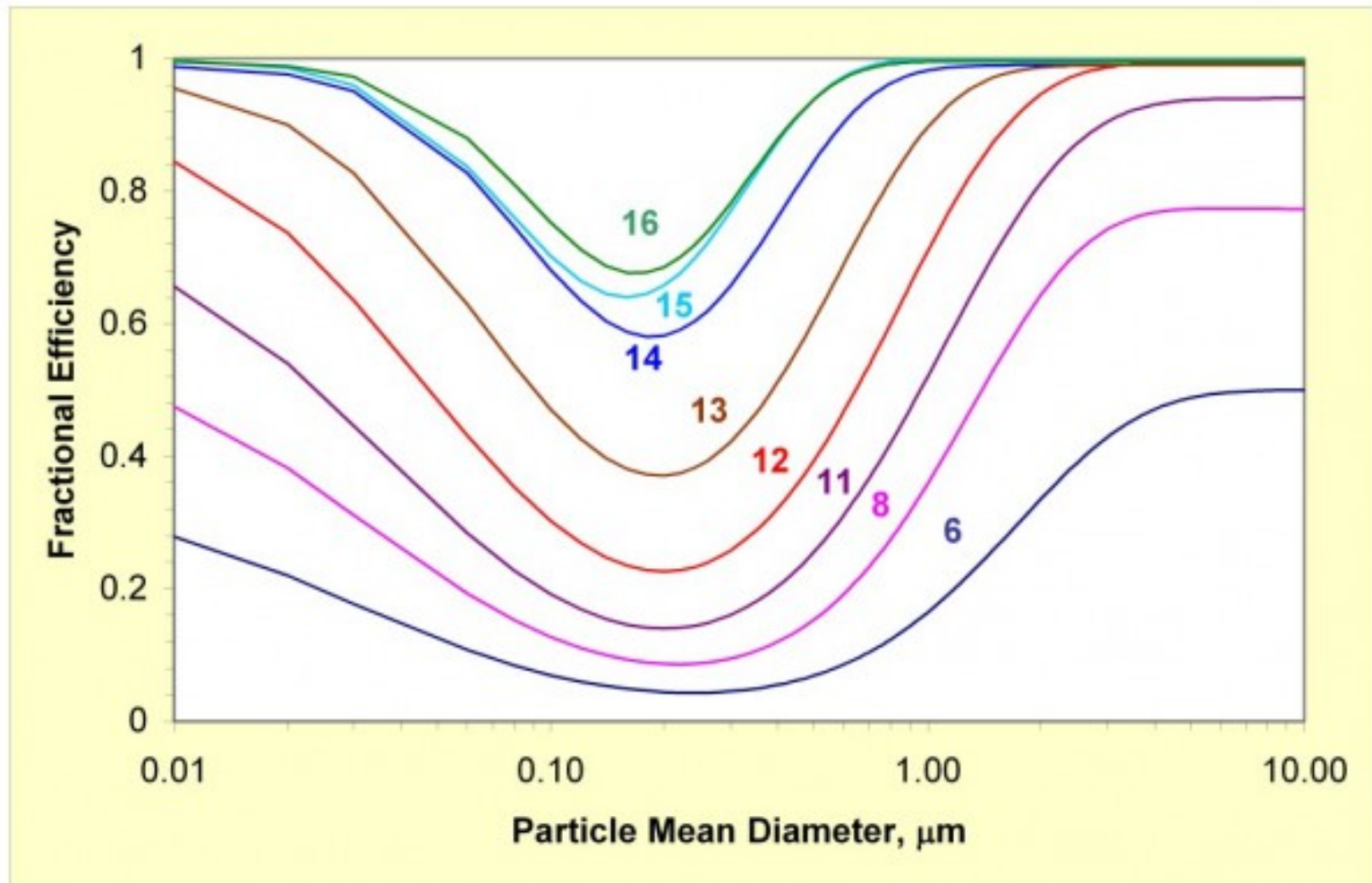


Human filters

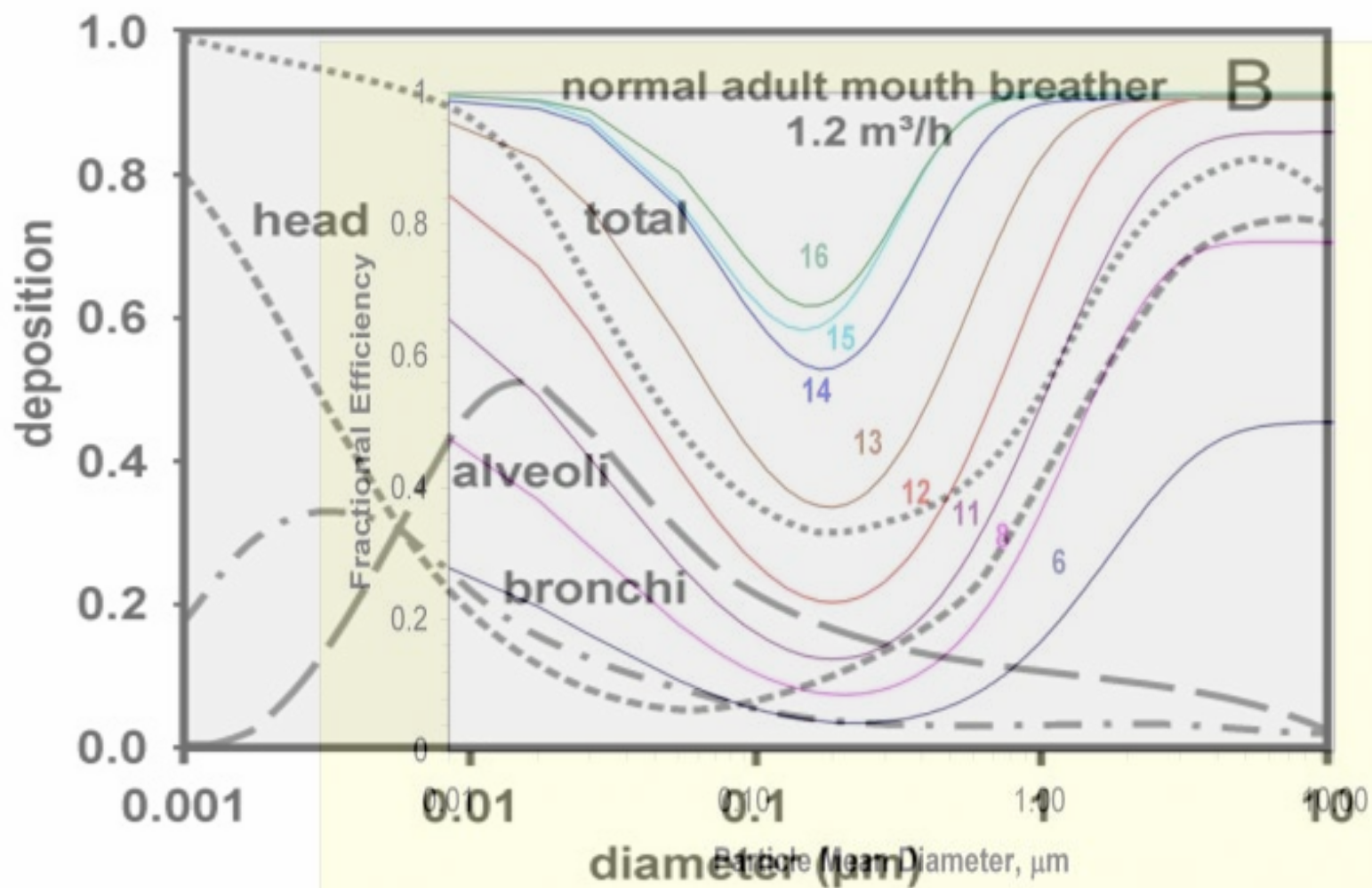


Task Group on Lung Dynamics (1996). *Health Physics*. 12: 173.





MERV Filter Models, National Air Filtration Association, <https://www.nafahq.org/merv-filter-models/>



Finding MERV 13 Filters

Buying online?

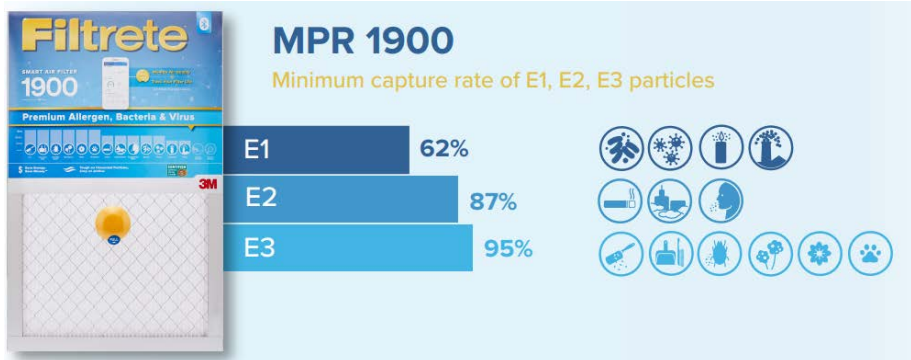
Search for “**MERV 13**”

Buying at a home improvement store?

Search for “**FPR 10**” or “**MPR 1900**”

Buying from Europe?

Search for “**F7**”



Premium (10)

FPR
10

- Large particles like household dust & lint, dust mites, pollen & pet dander
- Small particles like bacteria and mold spores
- Smoke, smog, microscopic allergens, plus particles that can carry viruses
- Particles that can carry odors

Best (8-9)

FPR
9

- Large particles like household dust & lint, dust mites, pollen & pet dander
- Small particles like bacteria and mold spores
- Smoke, smog, microscopic allergens, plus particles that can carry viruses

Better (6-7)

FPR
7

- Large particles like household dust & lint, dust mites, pollen & pet dander
- Small particles like bacteria and mold spores

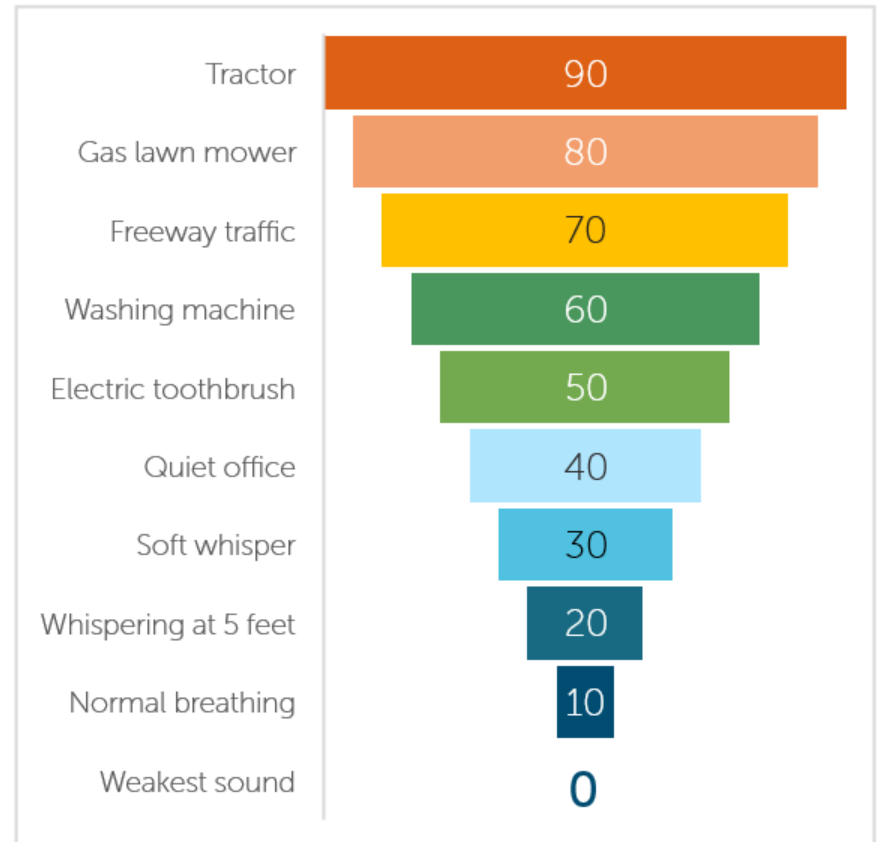
Good (4-5)

FPR
4

- Large particles like household dust & lint, dust mites, pollen & pet dander

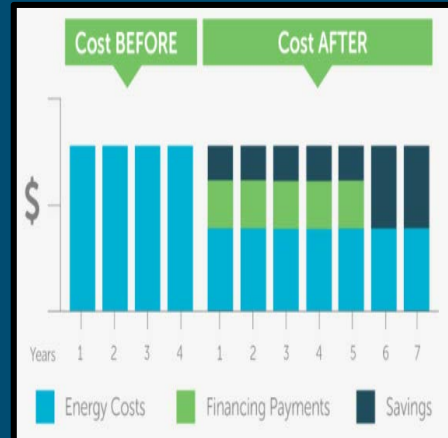
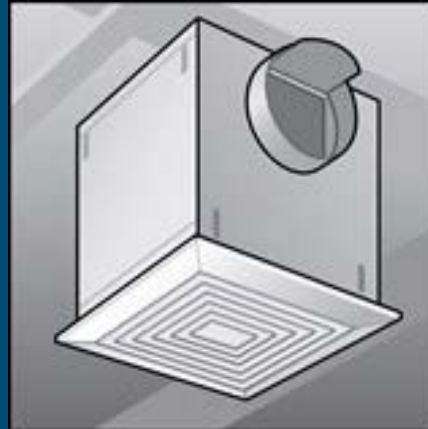
Image source: The Home Depot





Decibel Scale

Source: <https://chchearing.org/noise/common-environmental-noise-levels/>



Thank you!



Efficiency
Vermont

efficiencyvermont.com

One Care Asthma COPD Collaborative Dec 2020

Sarah Cosgrove's slides

Asthma & COPD

Triggers in the home



THE BRIEF TOBACCO INTERVENTION: THE 5As

ASK

"Do you currently smoke or use other forms of tobacco?"

ADVISE

"Quitting tobacco is one of the best things you can do for your health. I strongly encourage you to quit."

ASSESS

"Are you interested in quitting tobacco?"

ASSIST

IF READY TO QUIT: Provide brief counseling and medication (if appropriate). Refer patients to other support resources that can complement your care like 802quits.org and 1-800-QUIT-NOW (784-8669). For tips on how to offer brief counseling, see www.ahrq.gov/path/tobacco.htm.

IF NOT READY TO QUIT: Strongly encourage patients to consider quitting by using personalized motivational messages. Let them know you are there to help them when they are ready.

ARRANGE

Follow up regularly with patients who are trying to quit.



Smoke #1 trigger Asthma & COPD



802 QUITs Resources



Myhealthyvt.org

Environmental Assessment tool for Asthma Triggers

<https://www.epa.gov/asthma/asthma-home-environment-checklist>

Home Characteristics and Asthma Triggers

Checklist for Home Visitors

Using this Home Assessment Can Help Make Homes Healthier.

A trained home visitor can help find common asthma triggers in homes and discuss ways to reduce and remove triggers. Removing asthma triggers in the home, along with proper medical care can improve health.

The checklist is organized into a Core Assessment plus two appendices (Dust Mite Module and Mold and Moisture Module). The Core Assessment can be used for all types of housing and climates, but the additional modules can be used if dust mites or mold/moisture issues are suspected by the trained home visitor. The suggested action items in this checklist are generally simple and low cost.



Glossary of Asthma Triggers Commonly Found in Homes

Combustion by-products

Triggers: Particles and gases that are formed when fuel is burned.

Where Found: Gas cooking appliances, fireplaces, woodstoves, candles, incense, cigarettes, and unvented kerosene and gas space heaters.

Dust Mites

Triggers: Body parts and droppings.

Where Found: Mattresses, bedding, carpeting, curtains, upholstered furniture, and stuffed toys. Dust mites are too small to be seen with the naked eye. They can survive in a range of climates, but they prefer high humidity.

Mold

Triggers: Mold spores, fragments, and odors.

Where Found: Indoor mold growth is often found in areas with more moisture such as kitchens, bathrooms, and basements, or areas where water damage has occurred. There are many types of mold and they can be found in any climate.

Pests

Triggers: Cockroaches—Body parts and droppings.

Rodents—Fur, skin flakes, and urine.

Where Found: Areas with food and water such as kitchens, bathrooms, and basements.

Pets with fur

Triggers: Fur, skin flakes, and saliva.

Where Found: Throughout the home.

Secondhand Smoke

Triggers: Mix of smoke from the burning of a cigarette, pipe, or cigar and the smoke exhaled by a smoker.

Where Found: Anywhere that smoking is allowed.

Volatile organic compounds (VOCs)

Triggers: Chemical vapors that come from household items.

Where Found: Products such as cleaning agents, deodorizers, air fresheners, perfumes, paint, nail polish, and nail polish remover.

Core Assessment (continued)

HEATING and COOLING

Checklist Questions

How do you cool your home?
(check all that apply)

- ☐ Central A/C
☐ Window A/C (or portable free-standing unit)
☐ Fans
☐ Evaporative cooler
☐ Other: _____
☐ N/A

Potential Action Steps

Central A/C units

• Replace the filters every 3 months or as recommended by the manufacturer.

• Use filters with higher efficiency than standard furnace filters, such as upgraded pleated filters, if heating or cooling system manufacturer's specifications allow.

• The Heating Ventilation and Air Conditioning (HVAC) system should have a professional inspection annually.

• Promptly repair damaged parts.

Window A/C units

• Keep drip pans clean and the drain lines flowing properly.

• Follow the manufacturer's instructions for cleaning or replacing filters.

Evaporative coolers (often used in very dry climates)

• Follow the manufacturer's instructions for cleaning.

COOKING

Checklist Questions

What type of stove do you have?

- ☐ Gas
☐ Electric
☐ N/A

Do you use an exhaust fan when cooking on your stove?

- ☐ Yes
☐ No
☐ N/A

Does the fan exhaust to the outside?

- ☐ Yes
☐ No
☐ Don't know
☐ N/A

• Use your exhaust fan (if it exhausts to the outside) or open a window when cooking.

SMOKING

Checklist Questions

Do any members of your household smoke tobacco inside your home?

- ☐ Yes
☐ No

Do any visitors to your home use tobacco inside your home?

- ☐ Yes
☐ No

Potential Action Steps

• Make your home a smoke-free zone.

• Encourage household member(s) to stop smoking.

Regarding eCigarettes: eCigarette vapor can still contain toxic chemicals. Secondhand vapor might be a risk factor for triggering asthma symptoms.

DUST MITE MODULE

Answers in the red checkboxes (the first column) are associated with dust mites. The more checkmarks you have in the red column, the more likely you have high dust mite levels in your home. You can take actions shown at the end of this list.

Building

Are all your windows sealed shut or don't open?

☒ Yes ☐ No

Is any part of your living area below ground level?

☒ Yes ☐ No

If YES, does this area ever get wet or stay wet for long periods (more than 1 week)?

☒ Yes ☐ No

Heating, Ventilation, and Cooling

During winter, are some outside walls cold?

☒ Yes ☐ No ☐ Don't know

Does your air conditioner ever leak water onto walls or carpeting?

☒ Yes ☐ No ☐ N/A (no A/C)

Does your home sometimes smell "stuffy," "stale," or "musty"?

☒ Yes ☐ No ☐ Don't know

Bedroom Characteristics of Person with Asthma

Do you have upholstered furniture in the bedroom of the person with asthma?

☒ Yes ☐ No

Do you allow children to have stuffed animals/toys in the room?

☒ Yes ☐ No

Dust Reservoirs (overall home)

Do you have cloth sofa or chairs?

☒ Yes ☐ No

Do you have cloth curtains?

☒ Yes ☐ No

Can you see dust or dirt on your furniture, walls, ceiling, and curtains?

☒ Yes ☐ No

Do you have wall-to-wall carpeting in more than half of the rooms in your home?

☒ Yes ☐ No

Do you have wall-to-wall carpeting in your kitchen or bathroom?

☒ Yes ☐ No

Do you vacuum less than once a week?

☒ Yes ☐ No

Dampness

In the last 12 months, have you noticed condensation on windows in your home?

☒ Yes ☐ No ☐ Don't know

If YES, does moisture regularly build-up on your windows/walls?

☒ Yes ☐ No

In the last 12 months, have you had any water leaks?

☒ Yes ☐ No ☐ Don't know

Do you use a dehumidifier regularly?

☒ Yes ☐ No ☐ N/A

*Regular use of dehumidifiers may suggest that a home is humid (dust mites prefer humid environments).





Focus on:
**Where you spend most of your
time when you are home?**





Tell me about where you fall
asleep?
Do you stay there all night?



**Tell me about your
pets ?**



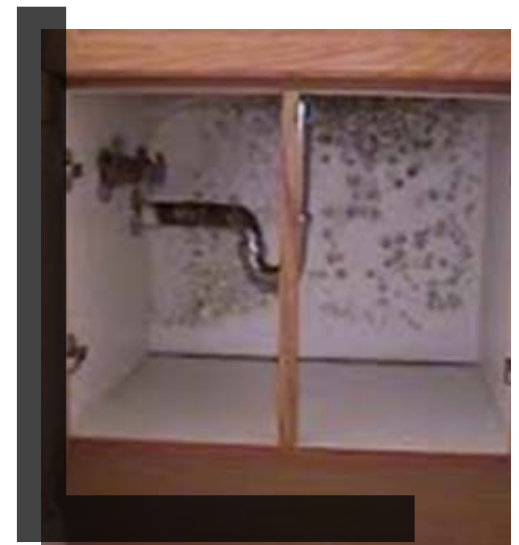
Strong Scents & Cleaning Products
If you can smell it... you are breathing it



Mold



Mold Prevention Strategies
Aftermath of Hurricanes & Major Floods





Asthma Trigger Control Products

Vermont Resources

- **Weatherization**
 - Renters/ Homeowner – low income qualified
 - Home not weatherized with past 10 years
 - Environmental assessment
 - Community support to RRMC Asthma program (in RRMC area)
 - Pest management support
 - No costs associated
 - <https://dcf.vermont.gov/benefits/weatherization>
- **Efficiency VT**
 - Homeowner
 - Energy audit and environmental assessment
 - Environmental report
 - Low-cost energy efficient appliances (free for low-income qualified)
 - Air Quality monitor and report
 - www.encyvermont.com
- **Neighbor Works**
 - Homeowner
 - Heat Squad Energy assessment and environmental assessment
 - Environmental report
 - Loan options/ home repairs
 - Costs associated
 - <https://www.nwwwt.org/>
- **Asthma educator/ Community Health worker**
 - Renters/ Homeowner
 - Asthma AS-ME program participants (see program criteria)
 - EPA Environmental home assessment checklist
 - Home assessment Asthma triggers report
 - No costs associated

Thank you!

Guide: https://802quits.org/wp-content/uploads/2020/07/802Quits_QuitGuide2020_lowres.pdf

Ordering: <https://802quits.org/providers/order-materials/>



Questions & Answers

***please use chat box for
questions**

UVM CME/CEU

If you are interested in claiming 1.0 Credit for attending this session, please use the following or scan the QR code below.

<http://www.highmarksce.com/uvmmed/index.cfm?do=ip.claimCreditApp&eventID=15468>



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Survey Monkey Session Evaluation Link:

<https://www.surveymonkey.com/r/EnvironmentTriggersSecondHandSmoke>



Who to Contact with Questions:

Emily Martin, RN
Clinical Education Coordinator
OneCare Vermont
emily.martin@onecarevt.org

Tawnya Safer
Clinical Program Specialist
OneCare Vermont
tawnya.safer@onecarevt.org



Thank You!

**Learning Collaborative
Participants Please
remain on the WebEx**



OneCare Vermont

onecarevt.org

