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# ROCIS Low Cost Monitoring Project

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## WELCOME to COHORT 54!

With over 50 monitoring cohorts to date, the ROCIS team and our participants have learned a great deal about low-cost monitors and the relevance of the information they provide. We have developed systems to help interpret and visualize data, as well as to offer customized, actionable steps to improve indoor air quality. As participants you continue to help the ROCIS LCMP team to improve our process, feedback, and the value to you and your household. Your data helps us to better understand the potential and best applications for both behavioral and technical interventions to reduce particles. We also monitor for other pollutants—carbon monoxide, carbon dioxide, and radon - which can reveal ongoing health risks from your house or the appliances within it. Your participation helps to build the base of knowledge to improve the quality of air in our homes and workplaces, and reduce the effects of poor outdoor air quality.

We hope you find this as interesting as we do. With the information collected we are able to offer better guidance on the use of low-cost monitors and the resolution of air quality problems.

If you have questions, or for more information, contact: Emily Dale (*cohort management & logistics*) ([ke\\_dale@hotmail.com](mailto:ke_dale@hotmail.com)); Linda Wigington (*interventions, data interpretation, troubleshooting equipment*) ([lwigington1@outlook.com](mailto:lwigington1@outlook.com)); Rob Busher (*data interpretation, troubleshooting equipment, online resources*) ([robb@rocis.org](mailto:robb@rocis.org)); Sam Totoni (*health impacts*) ([skc35@pitt.edu](mailto:skc35@pitt.edu)) and Jessica Kester (*meeting support & online support*) ([Jessica.Kester@psu.edu](mailto:Jessica.Kester@psu.edu))

Thank you again for the investment you are making!  
The ROCIS LCMP team: Emily, Linda, Rob, Sam & Jessie

### PROJECT OBJECTIVES

#### 1) Understand How to Use Monitors to Empower Occupants

- ✓ What monitors/visualization create the most appropriate call to action in reducing indoor exposure?
- ✓ What process is effective for supporting and maintaining occupant engagement?

#### 2) Collect Baseline Data

- ✓ How do outdoor particles affect indoor particle counts?
- ✓ How do house/building and mechanical system characteristics influence the indoor/outdoor particle count relationships?

#### 3) Explore the Impact of Behavioral and Technical Interventions

- ✓ Can low-cost monitors increase the effectiveness of the operation of a home's filtration systems?
- ✓ When is it appropriate to use a central air handler and high MERV filter to reduce particles in a home, and what determines/predicts the range of effectiveness?

#### 4) Support and Create Champions!

### VIRTUAL COHORT SNAPSHOT

- All online meetings are 75 minutes
- All meeting times are the same – 7:00 PM & repeated at 10:30 AM the next day
  - 7:00 PM meetings: Monday & Thursday; 10:30 AM meetings: Tuesday & Friday
- All meetings are recorded & best of each is shared
- Participation is either “**required**” (black font) or “**recommended**” (red font) for each meeting
- Each meeting will provide time for questions/discussion

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## Participant Expectations

### **Prior to Kick-off Meeting Thursday, February 23, 7:00 PM/Friday, February 24, 10:30 AM**

1) Complete surveys: ROCIS Cohort 54 Registration (by Wednesday, February 15) & House Characterization Survey (by Friday, February 17)

#### **And optionally:**

1. Join closed group on Facebook & follow ROCIS on Facebook, LinkedIn & Twitter
2. Download *Smell Pittsburgh* App

### **By Saturday (end of night), Saturday, February 25**

- 1) Complete & sign User Agreement (on front of clipboard)
- 2) Place & plug in monitors (one Dylos needs to be in a protected outdoor location w/ power)
- 3) Take photos of a) signed User Agreement and b) equipment as set up in monitoring locations
- 4) Upload photos of a) your signed User Agreement, b) equipment in set up location, and c) your head shot or your household for our virtual group photo
- 5) Confirm with us (by text or email) that everything is set up & working

### **Ongoing Monitoring**

- 1) Regularly check on monitors daily (5-7 minutes)
  - Week 1: Check all monitors twice a day (5 out of 7 days)
  - Weeks 2 & 3: Check monitors a minimum of once a day (5 out of 7 days)
- 2) Keep a diary/log of activity in your home/workplace daily (5-7 minutes)
- 3) Collect data and upload to ROCIS weekly (15-30 minutes)
  - Download Dylos data
  - Send photos of or file of Log/Incident report with manually collected readings of radon, CO, and CO<sub>2</sub>.
- 4) Continue to monitor and experiment! (weeks 2, 3, & 4)
  - Change household behavior or equipment operation to explore the impact. Examples include increasing runtime of air handler, portable air cleaner, or kitchen range hood, cooking on back burners & covering pans when cooking.

### **Wrap-up Meeting Thursday, March 23, 7:00 PM/Friday, March 24, 10:30 AM**

- 1) Repack equipment and kit & make arrangements for pick-up
- 2) Complete LCMP post survey

**PROPOSED SCHEDULE & TOPICS (bold & black font indicate required sessions)** Attendance in all of the sessions is encouraged as you will gain more from participating. All Monday/Thursday evening sessions are 7:00-8:15 PM; Tuesday/Friday morning sessions are 10:30-11:45 AM

**2/13 & 2/14: Intro Webinar**

**2/23 & 2/24: Cohort Kick-off**

2/27 & 2/28: Check-in

**3/2 & 3/3: Dylos Data Downloading**

3/6 & 3/7: What are good numbers? What are the health risks?

3/9 & 3/10: Access to Online Resources

3/13 & 3/14: Behavioral Interventions

**3/16 & 3/17: Filtration Interventions**

3/20 & 3/21: Health Impacts of Particles

**3/23 & 3/24: Wrap-up Meeting & Close**