

# Health + Energy Program Design Network

## Session 3: Measuring Impacts of Energy Efficiency Programs on Participant Health and Well-Being

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**Thursday, April 29, 2021 @ 3pm Eastern**



American Council for an Energy-Efficient Economy



The American Council for an Energy-Efficient Economy is a nonprofit 501(c)(3) founded in 1980. We act as a catalyst to advance energy efficiency policies, programs, technologies, investments, & behaviors.

Our research explores economic impacts, financing options, behavior changes, program design, and utility planning, as well as US national, state, & local policy.

Our work is made possible by foundation funding, contracts, government grants, and conference revenue.

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# Agenda

- Intro and Housekeeping
- Presentation: Measuring Impacts of Energy Efficiency Programs on Participant Health and Well-Being
- Breakouts Work Session
- Regroup for Resource Share-out
- Open Chat and Tech Support

# Resource Recap

- Resource folder was emailed out this morning
- Past recordings available in this folder, along with:
  - Workbook links
  - Services, Funding, and Measuring Guidance Documents
  - PDF of slides from previous sessions
- Feel free to share these materials with others!

Equity Deep Dive –  
Next Thursday, May 6 (3PM ET)

Let us know if you'd like to share an update about something you're working on!

# Workbooks

- Online documents for helping structure thinking
- A link to today's workbook has been dropped into the chat, please open it now
- To save your work, **enter your email address and press Submit**
- You will get an email with your responses and a link to edit them
- We'll use these books today

# Session 3: Measuring Impacts of Energy Efficiency Programs on Participant Health and Well-Being

Why should we measure and quantify the health impacts of our program?



# Why should we measure and quantify the health impacts of our program?

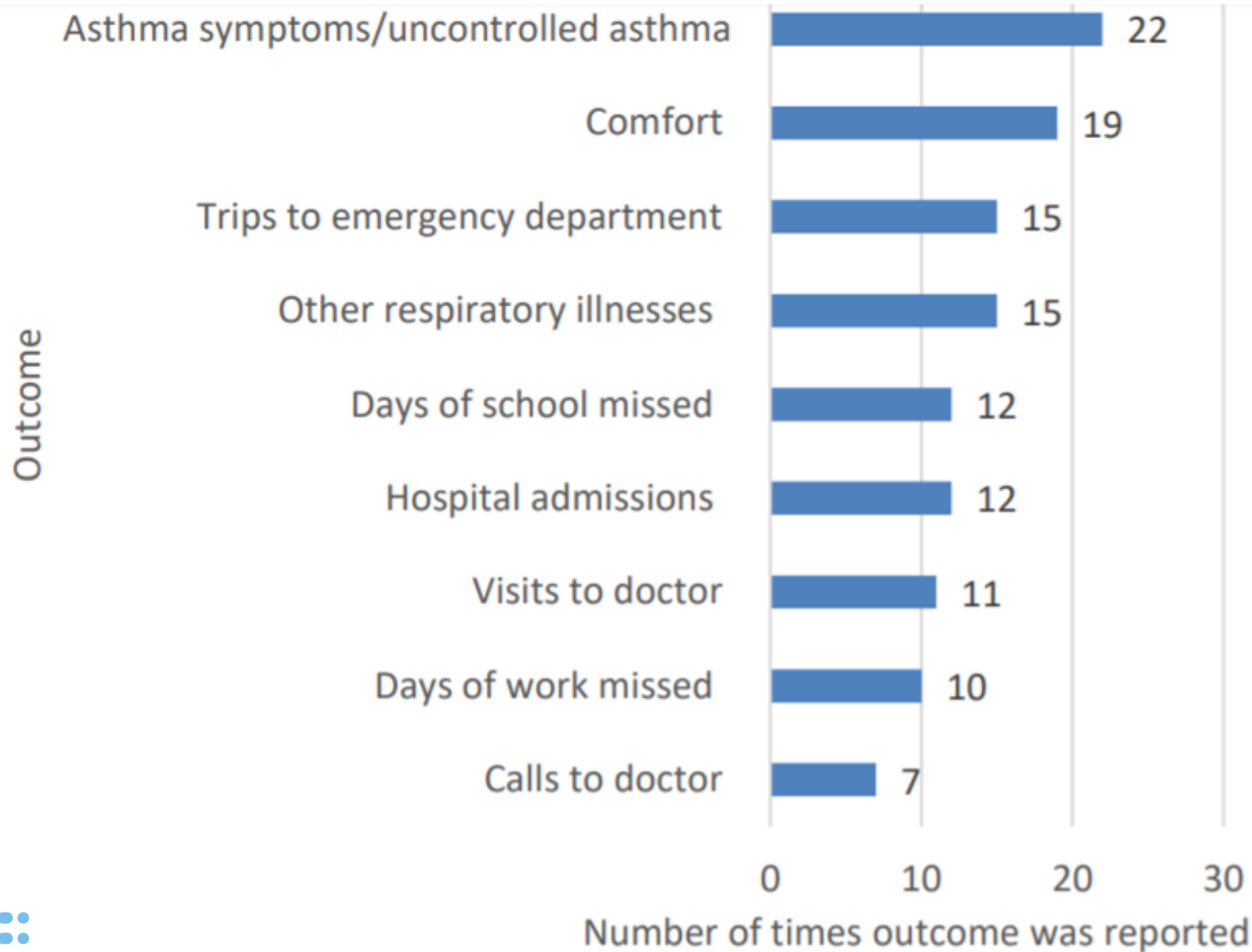
- Improve program outcomes
- Attract new funding
- Build partnerships

What health impacts can we measure?

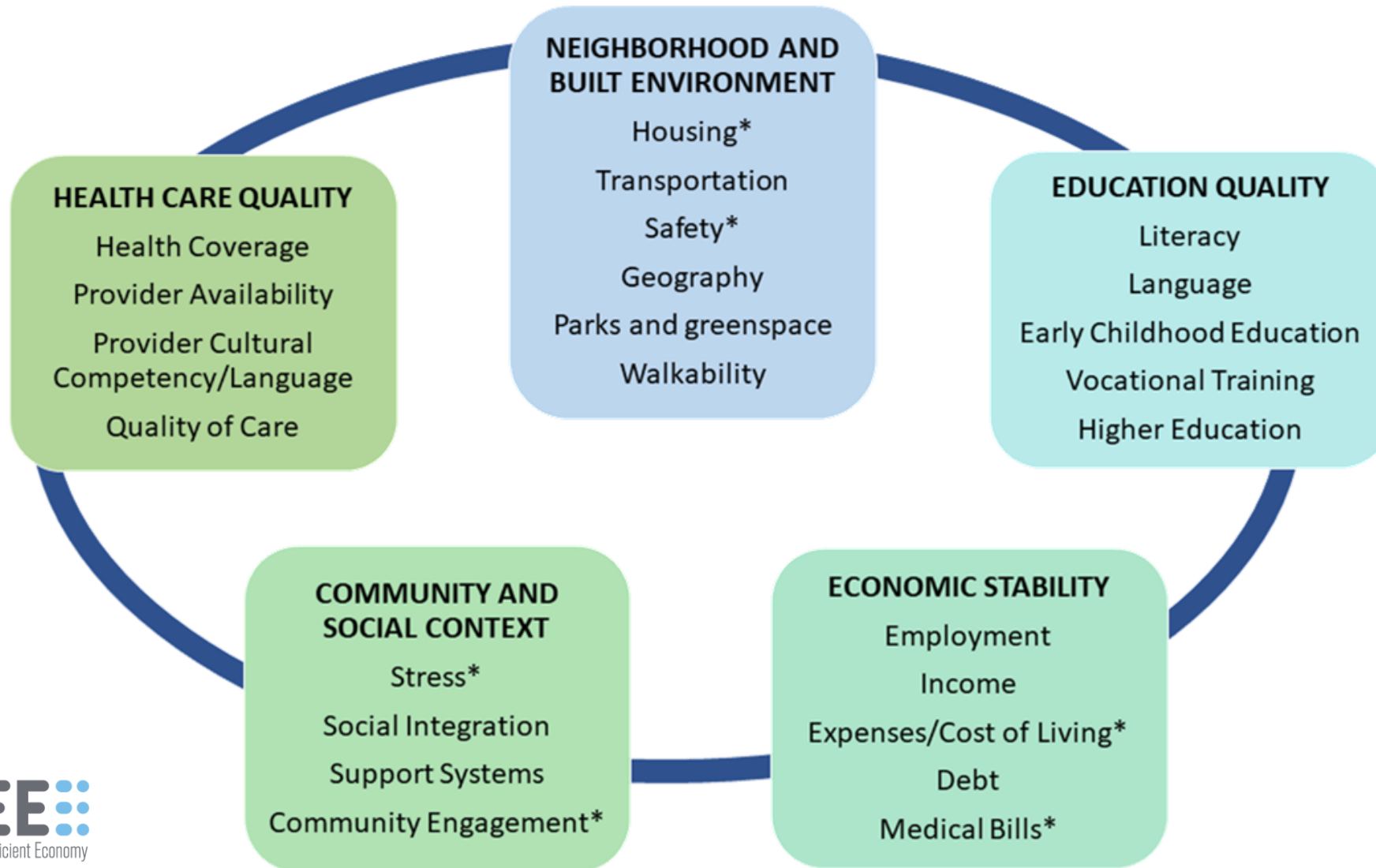
# Direct Measures of Health and Wellness

- Days of school or work missed
- Hospital admissions
- Emergency room visits
- Calls or visits to the doctor
- Asthma symptoms/Uncontrolled asthma
- Prevalence of other respiratory illnesses
- Comfort

POLL: What direct indicators of health are network members already measuring?



# Social Determinants of Health



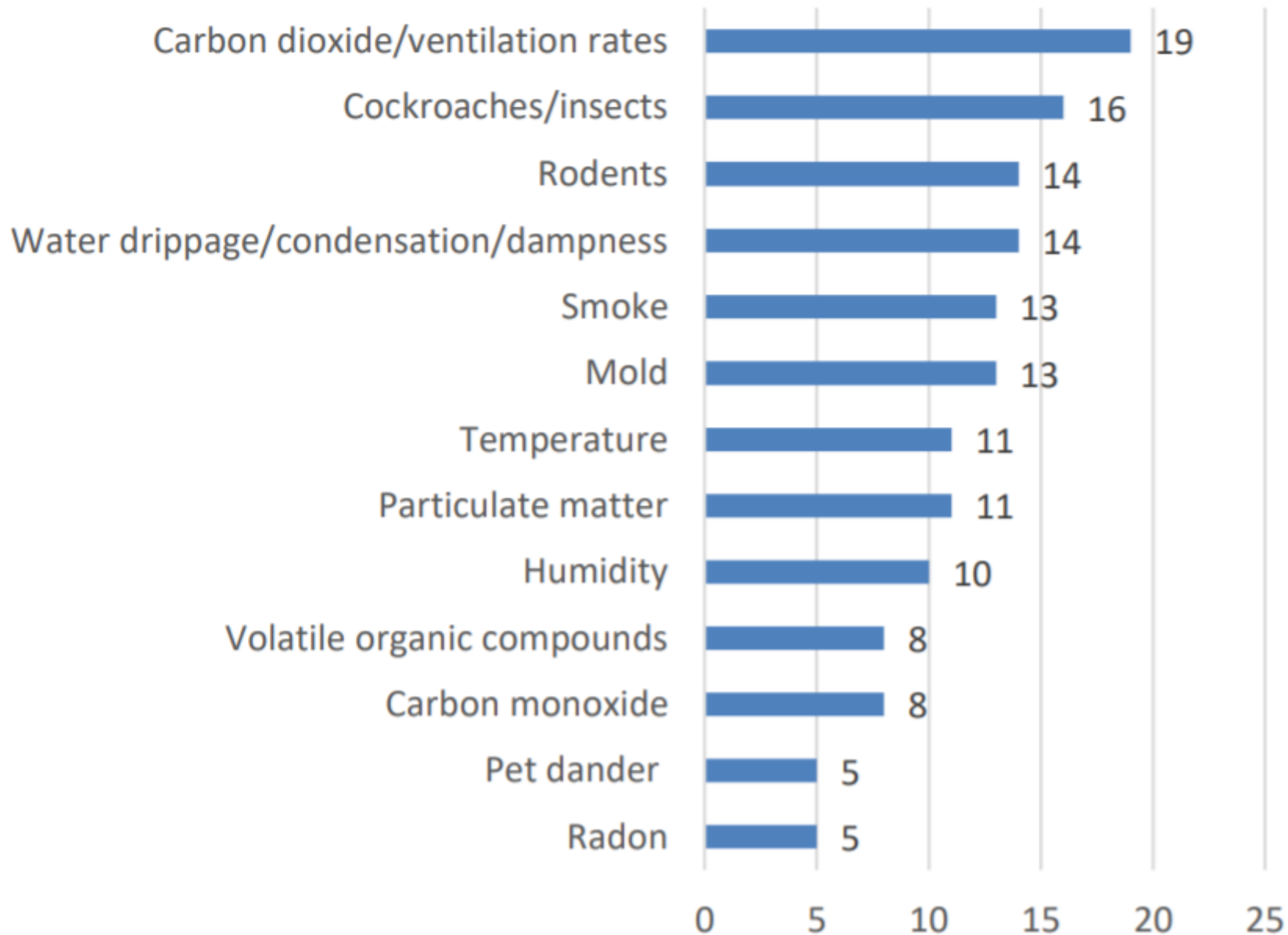
# Environmental Factors

- Physical, chemical, and biological factors that can impact health
  - Air pollutants –particulates, radon, CO, NOx, VOCs, smoke
  - CO2/Ventilation rates
  - Temperature
  - Humidity and moisture
  - Mold and mildew
  - Pests, insects and rodents
  - Pet hair and dander

POLL: What environmental factors are network members already measuring?



Indicator



Number of times indicator was reported

# Technology and Services

- Presence, installation, maintenance
  - Adequate ventilation equipment
  - Working smoke detectors and CO/radon monitors
  - Needed structural repairs
  - Mold and other remediation activities
  - Repair or replacement of furnaces
  - Maintenance history

POLL: What technologies and services are network members already tracking?



How can we measure the health impacts of our program?

# Surveys/Interviews

- Self-reported info about human health and environmental conditions
- Series of questions asked to participants

## Some Benefits

- Can identify many of the health impacts that a medical record might show, without having to navigate the privacy protections and other barriers of medical records.
- Can be completed remotely without a home visit.
- Can reach larger audiences and can be designed to be completed rapidly.

# Environmental Testing

- Quantify levels of chemical, physical, and biological factors influencing health outcomes
- Pre- and post-testing can show changes to a home environment that might be attributable to program services

## Some Benefits

- Can be used in a wide range of analyses
- Less likely to be subject to the issues of bias that surveys may face

# Visual Inspection

- Presence/absence of technologies
- Can help ID certain environmental conditions and risks
- Virtual options on the rise using phones and tablets

## Some Benefits

- Can be used to quickly identify hazards and risks
- Can be easily integrated into existing home visits at a low cost



# Modeling

- Uses well-documented relationships among energy use, pollution, human health, and other factors
- Can help estimate or forecast benefits of interventions
- Outputs are only as good as inputs and models!

## Some Benefits

- Can illustrate the links among various program services and impacts
- Can help demonstrate potential value of further growth or additional services

# Getting Started

# Good Practices for Health Impact Assessment

- Conduct a pre-intervention or baseline assessment
- Conduct a post-intervention assessment
- Collect data on multiple indicators that align with program goals
- When possible, directly measure human health and wellness

# Polls – Pre- and Post-Intervention Assessments

# Developing a Plan to Measure Impacts

# Step 1. Identify and engage the audience

- Who is your audience? Who is the impact evaluation for?
  - Funders?
  - Health partners?
  - Prospective participants?
- Engage this audience to learn about their priorities, needs, and preferences

## Step 2. Define the goals and scope of the effort

- Clear goals can help you select appropriate methods and levels of rigor and effort
  - Demonstrate benefits to potential participants
  - Align program elements with city or other agency priorities
  - Establish return on investment or value proposition
  - Develop partnerships with health-focused organizations.
- Select goals that reflect your available resources
  - Availability of staff to manage the effort
  - Budget
  - Access to equipment and access to technologies

## Step 3. Select your methods for data collection

- What methods will help you achieve your goals?
- How will you address your resource limitations?
  - Decide whether staff training or outside expertise are needed
  - Obtain needed funding or equipment
- Test your protocols before scaling up



## Step 4. Collect your data

- How will you track and analyze your data?
- Build in time to process data
- How will you format and store this information, especially with respect to privacy concerns?
- What standards can you put in place now that might help you later?

## Step 5. Analyze and report findings

- Consider your audience and their needs and preferences
- Can you highlight stories and the human picture of your impacts as a complement to other types of data reporting?
- Would monetizing your impacts be compelling to your target audiences?

## Step 6. Refine and improve program based on findings

- Measurement can build accountability and show progress
- Results can help identify strengths and weaknesses
- Iterative improvement over time
- Help minimize unintended consequences and more effectively meet community needs

# Breakout Working Session

# Breakout Instructions:

- Workbook 3 – Develop a model action plan for collecting health impact data
- Work through the questions on page 2 first – then discuss
- Introduce yourselves! (name, location, what kind of program you run, and where you are at with incorporating health into your work)
- Nominate a facilitator, then brainstorm how you might answer these questions

# Welcome Back!

(Did you save your workbook by pressing  
“Submit” on the last page of the document?)

# Why Introduce Your Program on the Google Group?

- Find others in your state or region working on these issues
- Make your own work and questions visible to others
- Connect with others working to address the same challenges, nearby and nationally

Help create a valuable peer directory by posting just once, e.g.:

- Your name, state, and email/preferred contact
- Your program name/organization
- One thing you're doing (or considering) to add health services to your program
- One question you have that someone else in the network might be able to answer

# Calendar of Upcoming Sessions

Date	Session Theme
<b>Thurs. May 6</b> <b>3PM ET</b>	DEEP DIVE 1: Equity in Health-Related Program Design
<b>Fri. May 28</b> <b>3PM ET</b>	Build relationships that expand services and funding for your program
<b>TENTATIVE:</b> <b>Jun. 10</b> <b>3PM ET</b>	DEEP DIVE 2: Cost-Effectiveness Testing and Monetization of Impacts
<b>Thurs. Jun. 24</b> <b>3PM ET</b>	‘Programs in the Wild’: Peer sharing of program design successes

Dates and times of additional sessions will be announced by email as they are scheduled.



Please go introduce yourself on the Google Group briefly!

Feel free to send questions, comments, or feedback to  
Christine at [cgerbode@aceee.org](mailto:cgerbode@aceee.org).

