Communities Actively Researching Exposure Study (CARES): Academic-Community Partnerships for Research in Appalachian Ohio

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Neighbors for Clean Air
Developed an Academic-Community Partnership
Jointly Conducted Pilot Research

- Community Advisory Board
- Pilot study of 141 residents
  - biological sampling (blood and hair) (Haynes et al. 2009)
  - balance study (Standridge et al. 2008)
- Community-wide survey (Haynes et al. 2011)
Community-wide Survey

• Assess community perception of air quality and manganese
• Inquiry of community’s interest in research
• Identify community’s preferred and trusted communication routes
### Concern about Local Environment, Odor, and Manganese Exposure

<table>
<thead>
<tr>
<th></th>
<th>Very Concerned-Concerned n (%)</th>
<th>Neutral n (%)</th>
<th>Slightly Concerned-Not Concerned n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air</td>
<td>209 (91%)</td>
<td>8 (3%)</td>
<td>12 (5%)</td>
</tr>
<tr>
<td>Water</td>
<td>193 (85%)</td>
<td>19 (8%)</td>
<td>15 (7%)</td>
</tr>
<tr>
<td>Soil</td>
<td>168 (74%)</td>
<td>33 (15%)</td>
<td>25 (5%)</td>
</tr>
<tr>
<td>Odor (smell) in air</td>
<td>172 (75%)</td>
<td>30 (13%)</td>
<td>26 (12%)</td>
</tr>
<tr>
<td>Mn Exposure</td>
<td>175 (77%)</td>
<td>25 (11%)</td>
<td>27 (12%)</td>
</tr>
</tbody>
</table>

\[n=227-229\]
Do you want to know more about your potential exposure to Mn?

- Yes: 87%
- No: 4%
- Don't know: 9%

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Level of Knowledge

- News reporters
- Friends/neighbors
- Local government officials
- State government officials
- Federal government officials
- Chemical industry officials
- Medical doctors
- Research scientists
- Teachers
- Websites
- Environmental groups
- Town meetings
- Church meetings

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Level of Trust

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No Trust vs. A lot of Trust
Marietta Community Actively Researching Exposure Study (CARES).

Evaluate the neurological effects of Mn exposure on children.
NIEHS Partners in Research

- Continue the academic-community partnership throughout the epidemiologic research study.
- Develop reciprocal training and research opportunities for
  - UC and Marietta communities
  - Medical doctors
  - News reporters
  - Environmental groups (Neighbors for Clean Air)
Study Cohort
7-9 year old children
N = 400

Washington and Wood Counties
7-9 year old children
N = 300

Guernsey, OH
7-9 year old children
N = 100

Home Environmental Sampling

Ambient Air Sampling

Personal Air Sampling

Biological Collection for Metals

Neuropsychological Assessment

Neuromotor Assessment

Health Assessment

Biomarker

Exposure Assessment

Health Assessment

Biomarker

Exposure Assessment
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Health Assessment

Exposure Assessment

Biomarker

Biological Collection for Metals

Neuropsychological Assessment

Neuromotor Assessment
“Science Advocates”
Environmental Health Sessions for Neighbors for Clean Air

- *All About Air Particles* and Health, Dr. Patrick Ryan
- *All About Modeling Air Mn*, Dr. Pamela Heckel
Community Education
Do you ever wonder if the air in your community affects your child's health?

To try and answer this question, the Communities Actively Researching Exposure Study (CARES) is taking place in your community. CARES is a combined effort between your local community members, Marietta College and the Department of Environmental Health at the University of Cincinnati.

You and your child may be eligible to participate if:

- You have a child who is 7, 8, or 9 years old.
- Your child has lived in Washington County throughout their life.

Families will receive $100 for their participation and will be reimbursed for their travel.

To learn more, contact Jody at 740-516-3200.

Current News

Check here for what's happening with CARES.

"Environmental health research should be done with a community, not simply on a community."
Created reciprocal training opportunities for Marietta journalists, UC scientists, and environmental journalism students.

UC environmental journalism students interviewing Marietta residents.

Stories published on research study website.
Developed and evaluated an online educational module for news reporters

Translational Research (T3)

- Partnered with NCA, Stakeholder Advisory Board, local news reporters
- Developed an online interactive educational module on air particles and health

http://www.eh.uc.edu/CARES/learn/video6.html
Online Module on improved **Capacity**, **Knowledge**, and **Interest** in reporting environmental topics, particularly on air particles and health.
Developed Online Pediatric Environmental Health CME
by Dr. Nicholas Newman
Conclusions

• The community trusts and perceives research scientists to be highly knowledgeable about environmental health information.
• We must take the time to understand our audience/research community.
• Engaging community members throughout the research process has enhanced the quality and meaning of the research.
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Community Advisory Board

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