

Communicating With Patients on Climate Change With an Equity Lens



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The Medical Society Consortium on
CLIMATE & HEALTH

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February 11, 2024 – MSSCH Annual Meeting

Disclosures/Acknowledgements

Dr. Shalini Shah is supported (in part) by the American Academy of Pediatrics (AAP) and funded (in part) by the cooperative agreement FAIN: NU61TS000296 from the Agency for Toxic Substances and Disease Registry (ATSDR). The U.S. Environmental Protection Agency (EPA) supports the PEHSU by providing partial funding to ATSDR under Inter-Agency Agreement number DW-75-95877701. This project was also supported (in part) by the National Institute of Environmental Health Sciences of the National Institutes of Health under Award Number K23ES031663 and the Asthma and Allergy Foundation of America New England Chapter (AAFANE) under the 2022 Medical Research Grant. The content is solely the responsibility of the authors and does not necessarily represent the official views of any agency, determination, or policy. Use of trade names that may be mentioned is for identification only and does not imply endorsement by the CDC/ATSDR, EPA or NIH.



Boston Children's Hospital
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Region 1: New England
PEHSU
Pediatric Environmental Health
Specialty Unit

The What

PEDIATRICS' PERSPECTIVES

Climate Change as a Social Determinant of Health

Maya I. Ragavan, MD, MPH, MS,^a Lucy E. Marcil, MD, MPH,^b Arvin Garg, MD, MPH^b

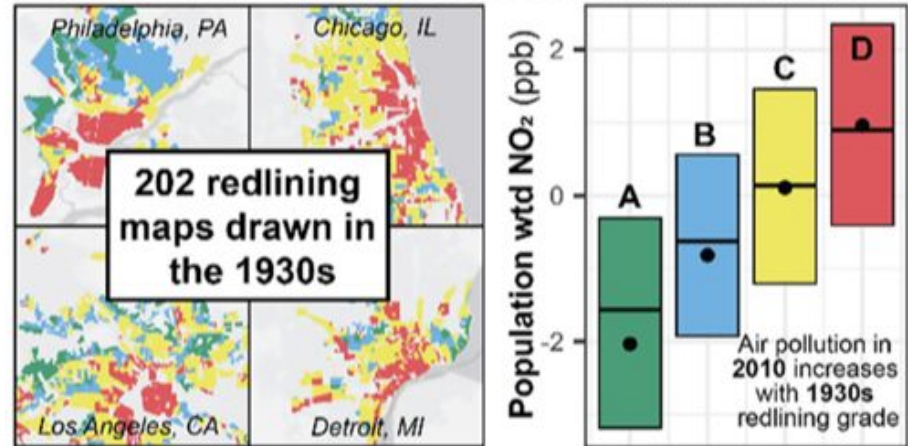
The Why - Understanding Inequity & Climate

Temperature disparities in historically redlined areas



Climate. 2020. Hoffman, Shandas, Pendleton.

Modern air pollution disparities in historically redlined areas



Environ. Sci. Technol. Lett. 2022. Lane et al.

Where Does Climate Fit?

Screening protocols include structural determinants of health and climate risks

Ex: Food security, water source, housing security and safety, energy security, depression and anxiety

Health promotion includes health and planetary benefits

Ex: Diet, active transportation and outdoor play, civic engagement

Care for all children considers and anticipates climate risks

Ex: Children with complex medical conditions and disasters, those participating in sports and extreme heat, children with asthma and allergies and poor air quality and pollen

Anticipatory guidance is informed by climate change

Ex: Never leaving children unattended in vehicles, heat and sun safety, street safety, accessing public health alerts, prevention of vector-borne diseases and emerging harms

Community resource network and referral plans are in place and center patient concerns

Pediatricians can support climate and public health preparedness and adaptation that centers the needs of children, equity and child health.

Fig. Aspects of climate-informed primary care pediatrics.

Source: Philipsborn et al. 2021

A pediatrician's guide to climate-change informed care

Where Does Climate Fit?



Preventative Screening



Medical Hx and
Medication Review



Illness related visits –
highlight a climate health
link



Well Care - Anticipatory
Guidance

The How - Centering Equity

- Be prepared – know your community
- Educational resources that prioritize health literacy, language and format accessibility
- Considering the accessibility of adaptive interventions
- Building community partnerships with mutual benefit
- Incorporating patient and family input
- Advocacy for upstream change

Recognizing Barriers



Time

Imposter syndrome

Feeling partisan

Catch 22 situations

Limited resources



Communication Strategies

Be open and receptive –
“read the room”

Acknowledge/validate

Empower, avoid victimization

Personal, positive, & local

Integrating Climate – Resources for Patients & Professionals

Pediatrics Maintenance of Certification Educational Modules

Health Effects of Climate Change on Children

Self-paced

Enroll Now

EMORY Community

CLIMATERX – Educational Handouts

Anticipatory Guidance and Context-Specific Resources to Protect Children in a Changing Climate



Heat Related Illness

Sea Level Rise & Flooding

Nutrition

Extreme Weather

Infectious Disease

Asthma & Allergies

Mental Health

Did you know?
Climate disasters and forced migration have been linked to PTSD, depression, and anxiety. As children learn more about climate change, we are seeing a rise in "eco-anxiety" or "eco-grief", as they worry about a future with the threats of a changing climate. Feelings may fear, anger, sadness, etc. Extreme weather due to climate change limits opportunities for physical/outdoor activities and social events, which can make isolation worse.

Community Resources
Complete an [activity book](#) with your child(ren) to help cope after a climate disaster
Call the National Suicide Prevention Lifeline at 988 if you or a loved one are experiencing emotional distress, thoughts of self-harm, or a suicidal crisis.

Action Plan

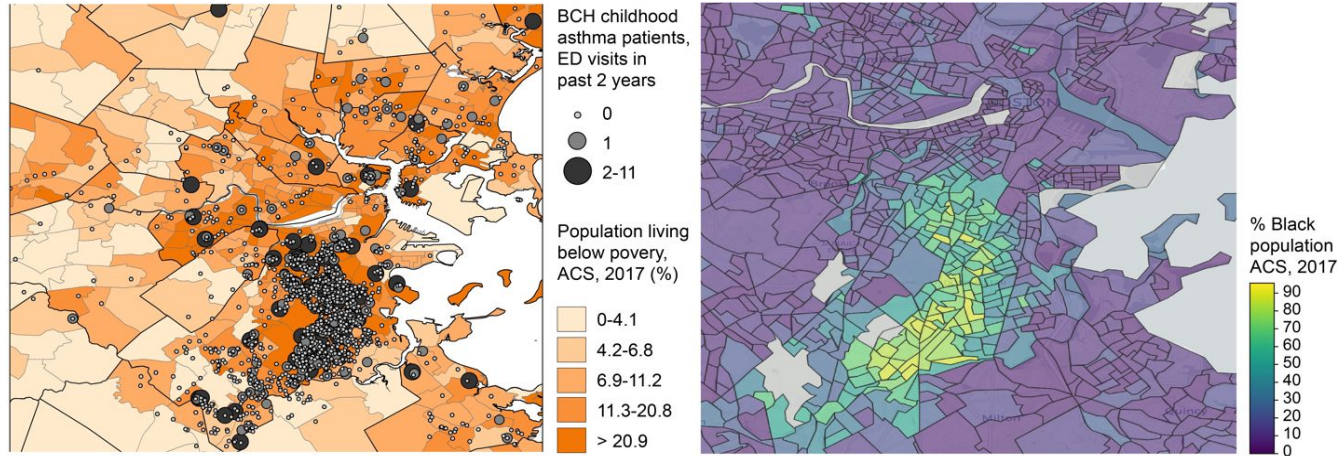
- Engage in conversations
 - Discuss with friends, family, and children about climate and how it is impacting our lives
 - Promote awareness about the effects of climate in your community
- Watch for warning signs: Look for changes in children's behavior, attitude, motivation, appetite, sleep patterns and school performance
- Take action
 - Develop a safety plan
 - Remove access to harmful objects such as firearms and ammunition
 - Seek professional help with your medical provider to discuss therapy and/or other options

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Environmental/Climate Screening – A Pilot



Left Panel: 3,000 patients with asthma, overlaid on census tracts colored by percentage of population underneath the poverty line.

Right panel. Map of the same area of Boston overlaid with census block groups colored by the percentage of Black population.

Approach

HEALTHY HOMES “HHOMES” SCREENER TOPICS

H: Housing type, age/condition and ownership status

H: H2O (water contamination, mold)

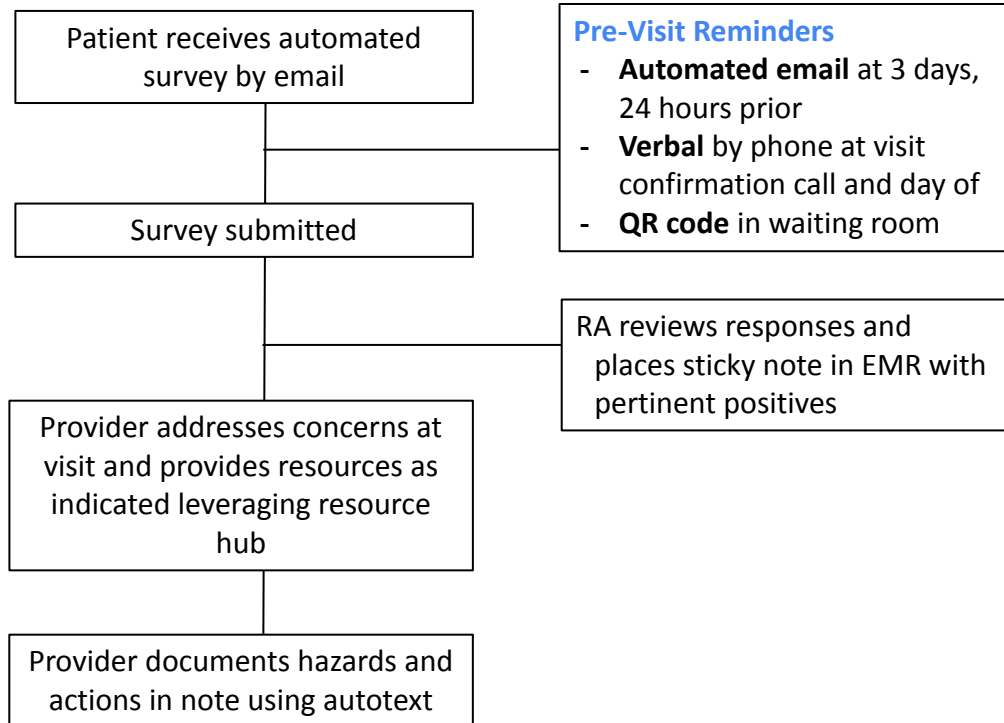
O: Oxygen (indoor/outdoor air quality, smoke exposure)

M: Mites (pests/rodents)

E: Exposures (chemical products, hazardous sites)

S: Stressors (SDOH, climate change)

WORKFLOW



Lessons & Limitations

TESTIMONIAL: “I am finding it a time saver in the appointments because I can hone in on the responses instead of starting a fishing process of trying to identify the needs. I appreciate the upfront work of getting questionnaires in the chart and hope we can continue this screening program long term.”



Available in English & Spanish

	MOLD	AIR QUALITY	MITES/PESTS	TEMP INSECURITY	FOOD INSECURITY	ENERGY INSECURITY
	Handouts available					
	Websites available					
	Consider advocacy letter, social work consult, Greater Boston Legal Services (GBLS) referral					
Community Partner Options	living in Boston? Breathe Easy not living in Boston? Local Board of Health Community Asthma Initiative			Cooling Centers	Family Food Connections/Food Pantry	MA Low Income Energy Assistance Program
Physical Resource Options	Cleaning kit (mask, gloves, disinfectants)	HEPA filter Vacuum	Dustmite bed/pillow covers Copper-mesh wire Food storage bins	Too hot? Fans, AC, window blocking shades, dehumidifier Too cold? Insulation kits		
	Breathe Easy Local Board of Health Community Asthma	https://www.boston.gov/departments/public-health-commission/breathe-easy-home https://www.naccho.org/membership/lhd-directory?searchType=standard&lhd-state=MA#card-filter				

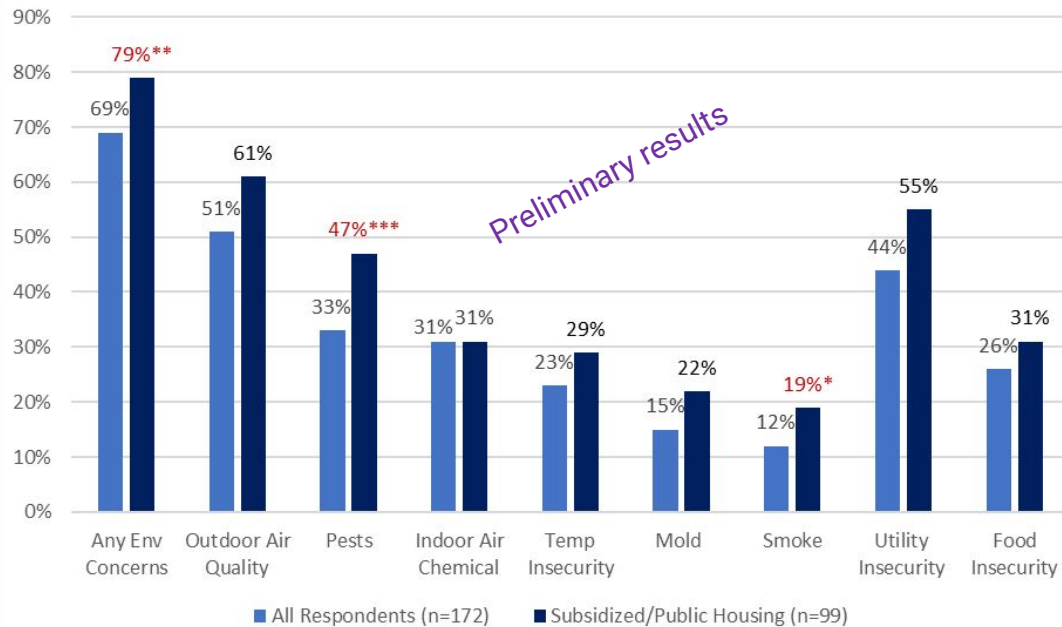
Provider Resource Hub

Physical Resources
Over \$2K worth of hazard mitigation supplies

Distribution of Number of Environmental Concerns Reported
(n=172)



Disproportionate Environmental Hazard Burden Experienced by Residents of Subsidized/Public Housing



Temperature Insecurity Screening
(preliminary)

- 23% of all respondents
- 30% of those living in subsidized/public housing
- 60% also reported utility insecurity*
- 45% (18/40) also reported food insecurity*

* p < 0.05



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Transition to Breakouts

