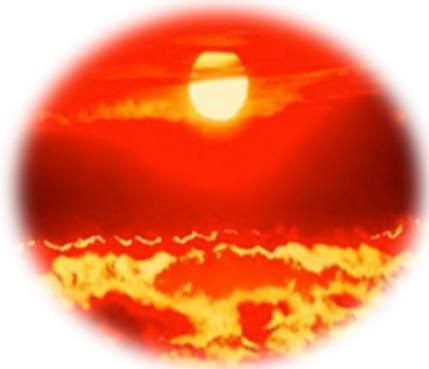


# Northeast Regional Heat Collaborative

Lowering Our Heat Advisory Threshold to Protect Public Health



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# Purpose For Our Work

The Northeast Regional Heat Collaborative is working together to conduct research, improve the effectiveness of heat risk communication strategies, and protect public health.

# NERHC Partners

- Rhode Island Department of Health
- New Hampshire Department of Health and Human Services
- Maine Department of Health and Human Services
- Vermont Department of Health
- Brown University: School of Public Health
- The Centers for Disease Control and Prevention
- The National Weather Service



# Background

**Heat is a major public health threat, even in New England.**

**In the US, more people die from extreme heat than all other extreme weather events combined.**



# Background

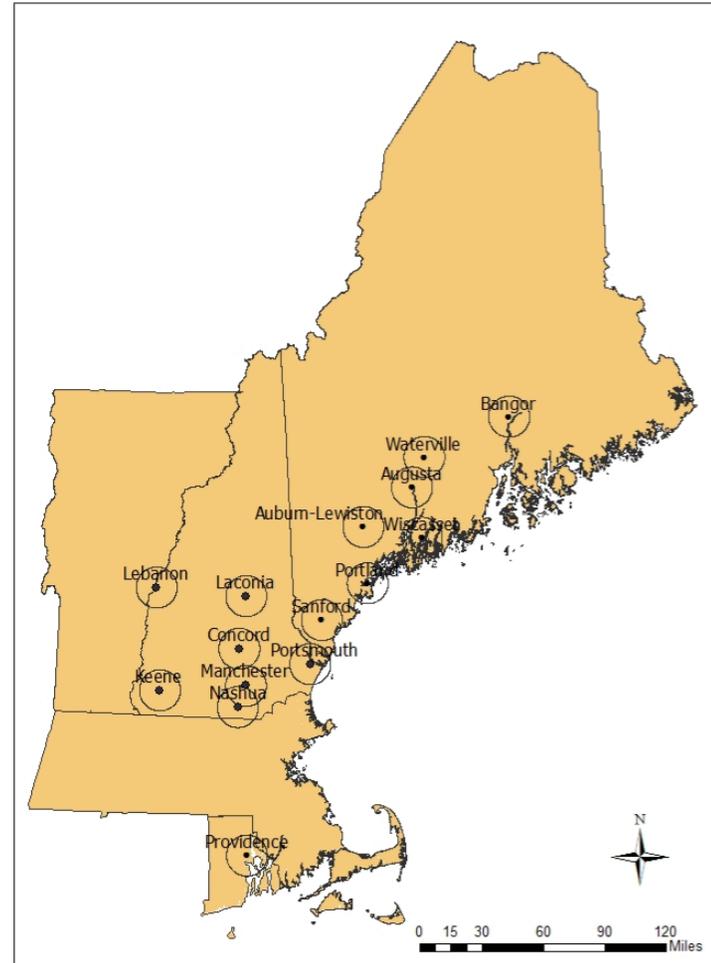
## At risk populations include:

- Older adults
- Children
- People of color
- Low income
- People with chronic diseases
- Those taking certain medications
- Outdoor workers/athletes
- Socially isolated individuals
- People without access to AC



# Northeast Regional Heat Collabor

Examining the Impact of Heat Index on Emergency Department Visits and Deaths in the Northeast



Study Areas for Northeast Heat-Health Analysis

# Research Questions

- How does heat index impact health?
- Are heat advisories optimal for protecting public health in the Northeast?
- What can state and local health agencies and other partners do to reduce risk?

# Data

## Study Period

- May 1-September 30
- RI (2005-2012); ME (2001-2010); & NH (2000-2009)

## Study Area

- Towns within 10 miles of a NOAA weather station (ME, NH), and all of RI
- Population included 60% of ME, 66% of NH, and 100% of RI  
(**an estimated 2.7 million people**)

## Exposure

- Daily maximum heat index

## Outcome

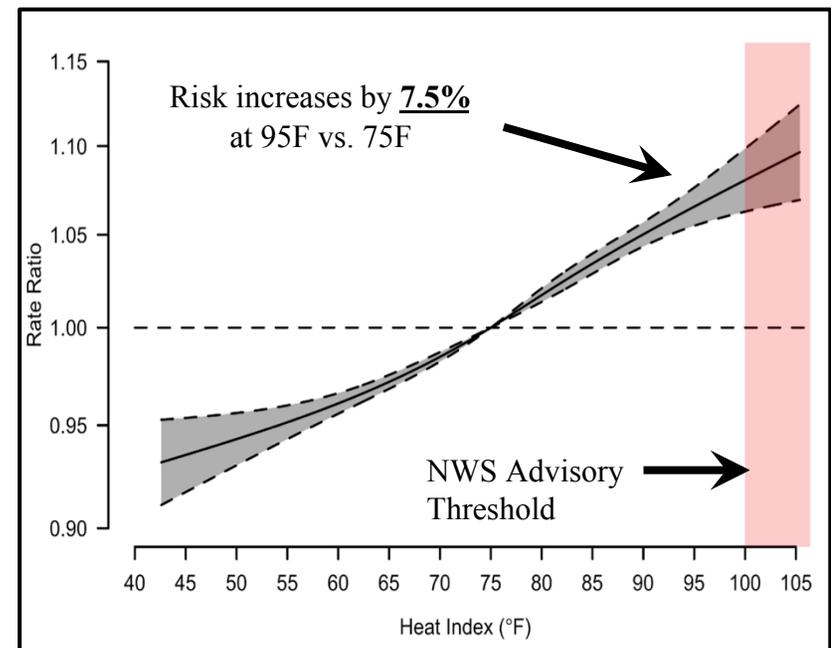
- Counts of daily all-cause and heat-specific emergency department (ED) visits
- Counts of daily all-cause deaths

# Results- All Cause ED Visits

Over one week following a day with a max HI of 95°F (as compared to 75°F)

- Risk for all cause ED visits increases by **7.5%\***
- **784** excess all cause ED visits\*

\*Annually, during warm season (May-Sept)

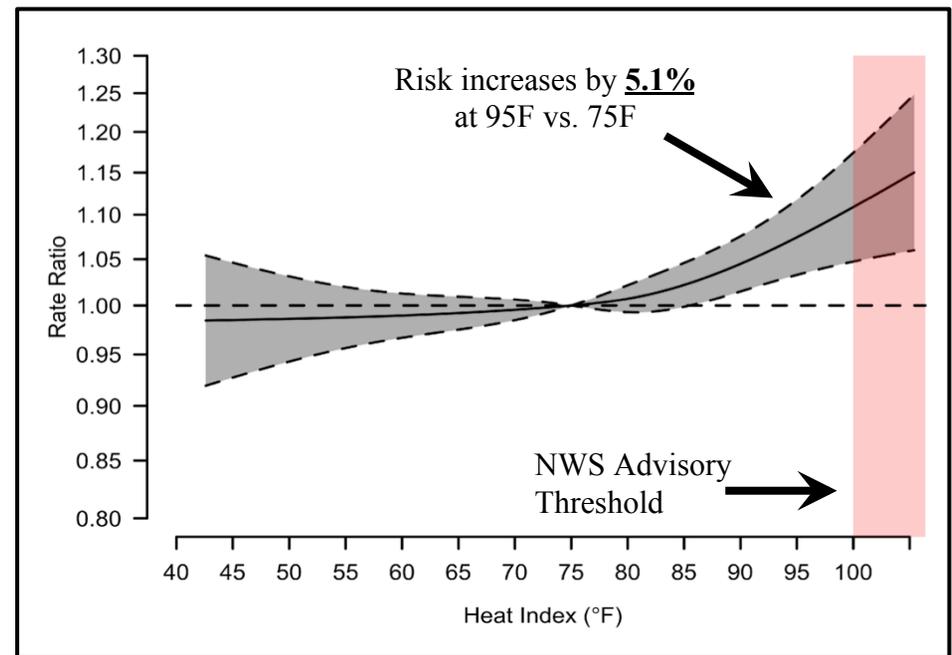


# Results- All Cause Deaths

Over one week following a day with a max HI of 95°F (as compared to 75°F)

- Risk of death increases by **5.1%\***
- Excess deaths- **22\***

\*Annually, during warm season (May-Sept)



# Results- Seasonal ED Impacts

Annual excess all-cause ED visits occurring in the Study Area:

→ Between HI 90°F and 95°F- 1343/year\*

→ Between HI 95°F and 100°F- 552/year\*

→ At or above HI 100°F- 232/year\*

\*Annually, during warm season (May-Sept)

**For more information:** Environmental Research, *Heat-related morbidity and mortality in New England: Evidence for local policy*. 2017

<https://doi.org/10.1016/j.envres.2017.02.005>



# Heat Advisory Policy

## **Previous** National Weather Service Thresholds for New England

**HEAT ADVISORY**

**HEAT WARNING**

**HEAT WAVE**

100° - 104°F  
higher

105°F and above

3 consecutive days 90°F or

(daytime heat indices for 2 or more hours)

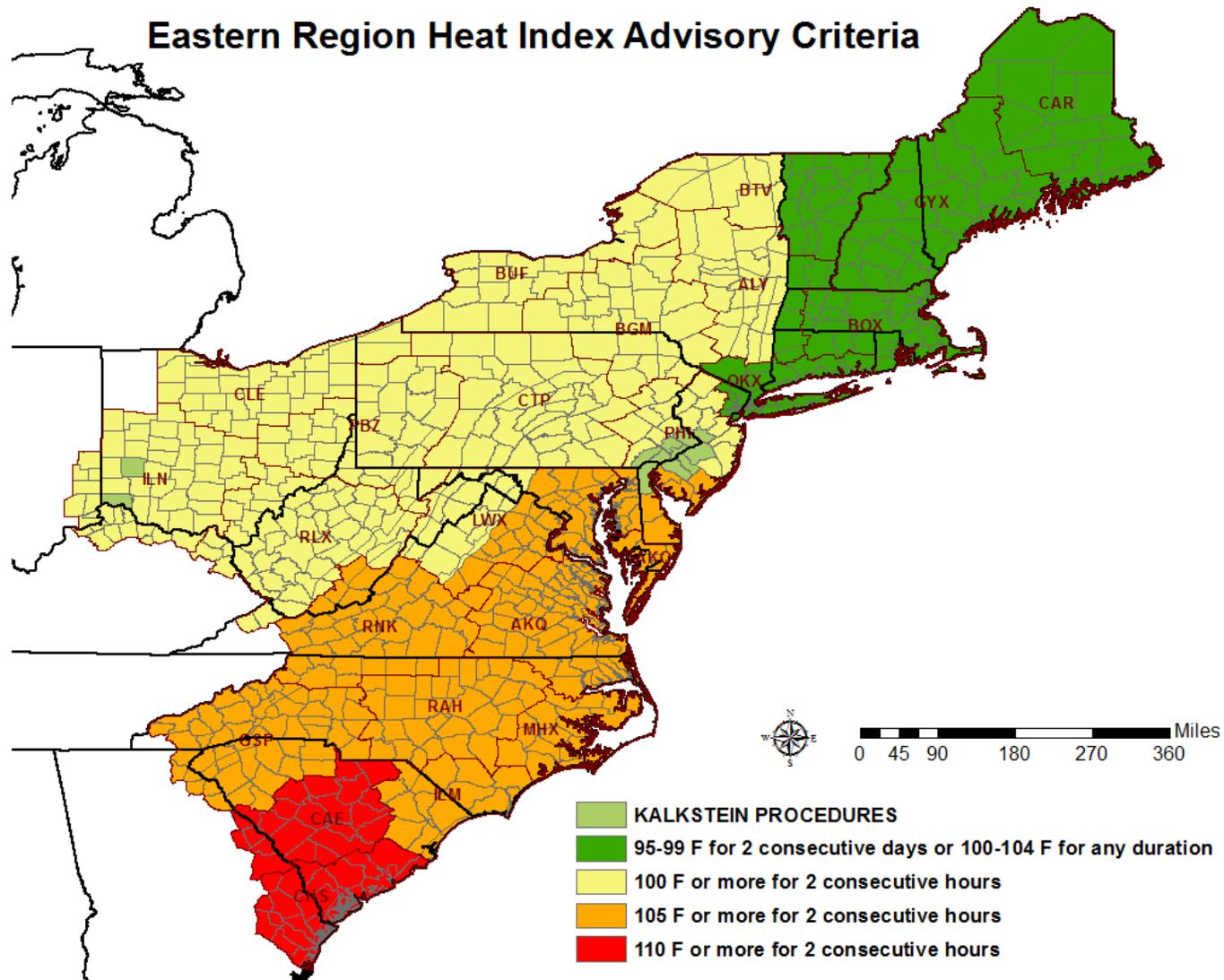
## **New** Heat Advisory Threshold for New England

Forecast for heat index of at least 100°F to 104°F for any length of time or  
Heat index of 95°F to 99°F for two consecutive days

# New Heat Advisory Policy



## Eastern Region Heat Index Advisory Criteria



# Next Steps

**Collaborate with our local NWS offices, news meteorologists, and public health partners to develop consistent, improved, and targeted heat risk communication strategies and toolkits for the New England region.**

Thank you!

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