



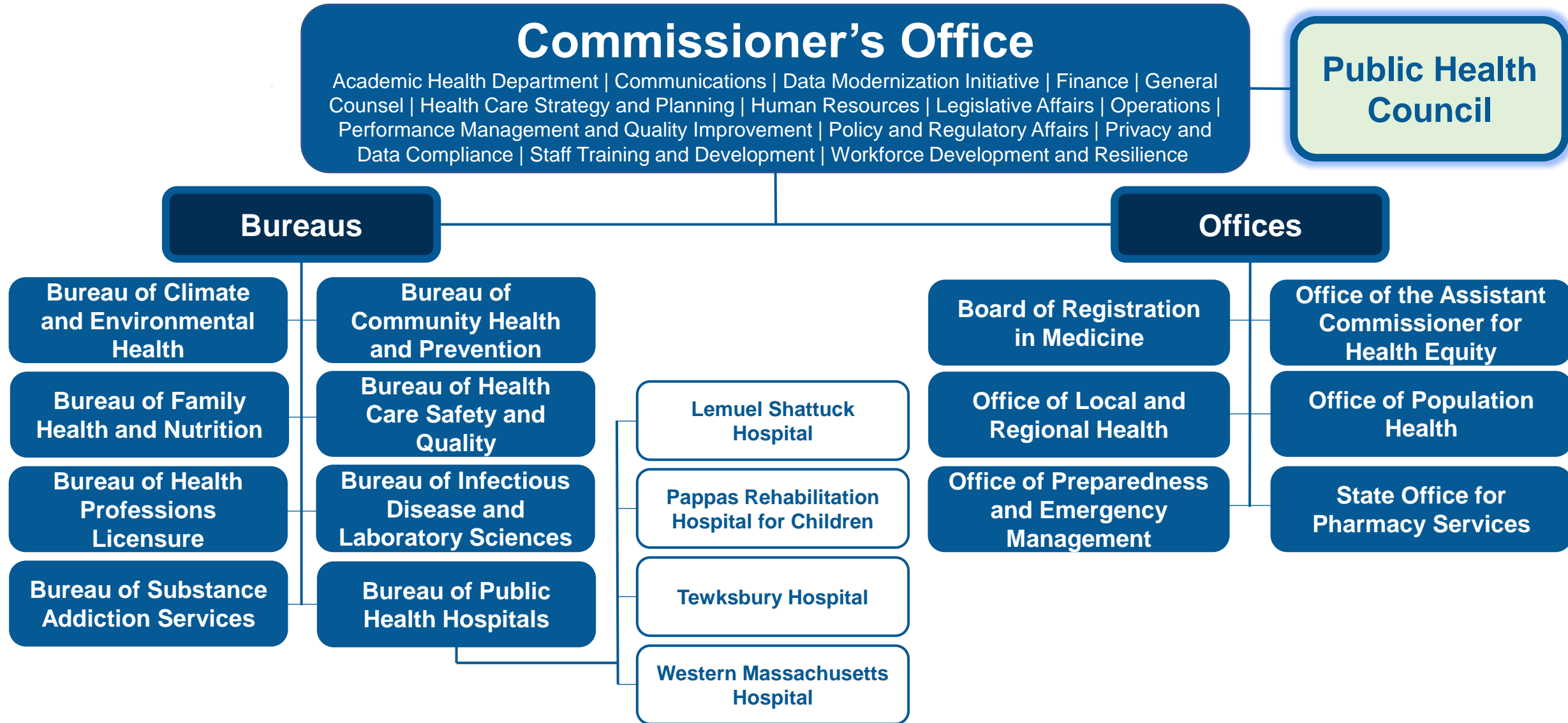
Massachusetts Department of Public Health

Public Health Council Meeting May 14, 2025

Robert Goldstein, Commissioner

*Today's presentation is available on mass.gov/dph under
"Upcoming Events" by clicking on the May 14 Public Health Council listing.*

Massachusetts Department of Public Health



National Nurses Week



Meet some of the nurses who work at DPH — like Pauline Bonnie, a registered nurse at Western Massachusetts Hospital — online at mass.gov/info-details/dph-staff-spotlight-nurses.

National Hospital Week



Meet a few of the dedicated workforce at DPH's public health hospitals — like Anh Ho, an environmental service specialist at Tewksbury Hospital — online at mass.gov/info-details/dph-staff-spotlight-public-health-hospital-staff.

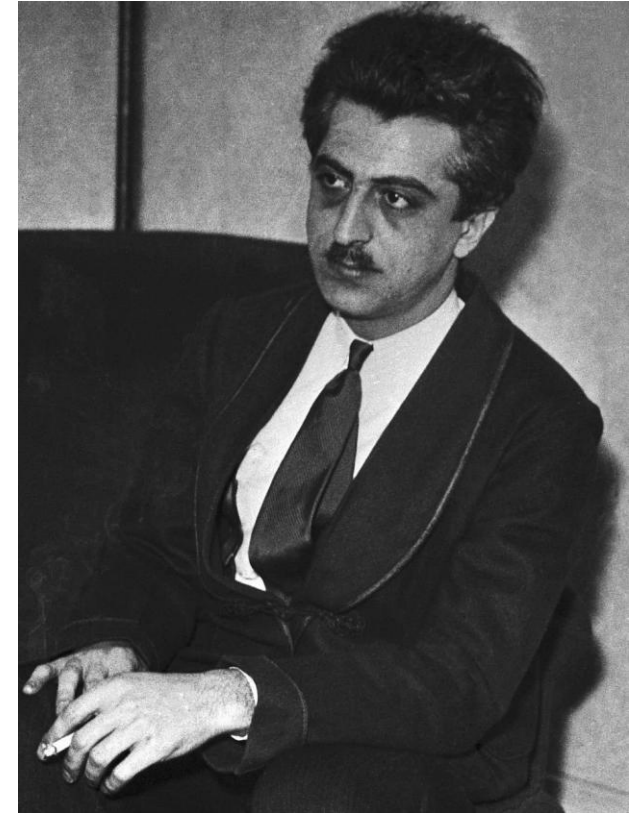
Women's Health Month



Margaret Sanger



Katharine McCormick



Gregory Pincus

ACCESS Law

Want more **control** over your
birth control?



In Massachusetts, there are many ways to get **birth control** and **emergency contraception** at little to no cost.

mass.gov/BirthControl

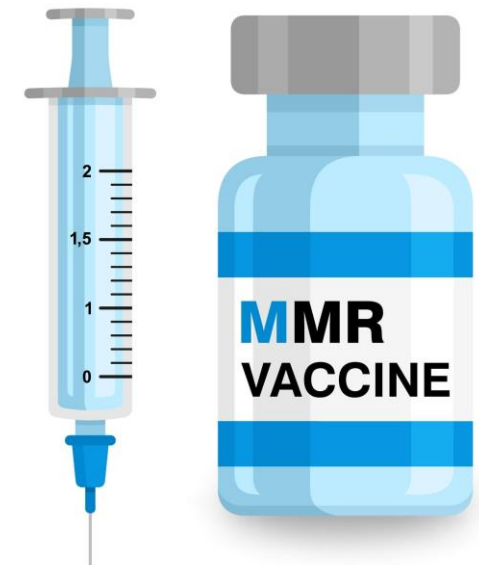
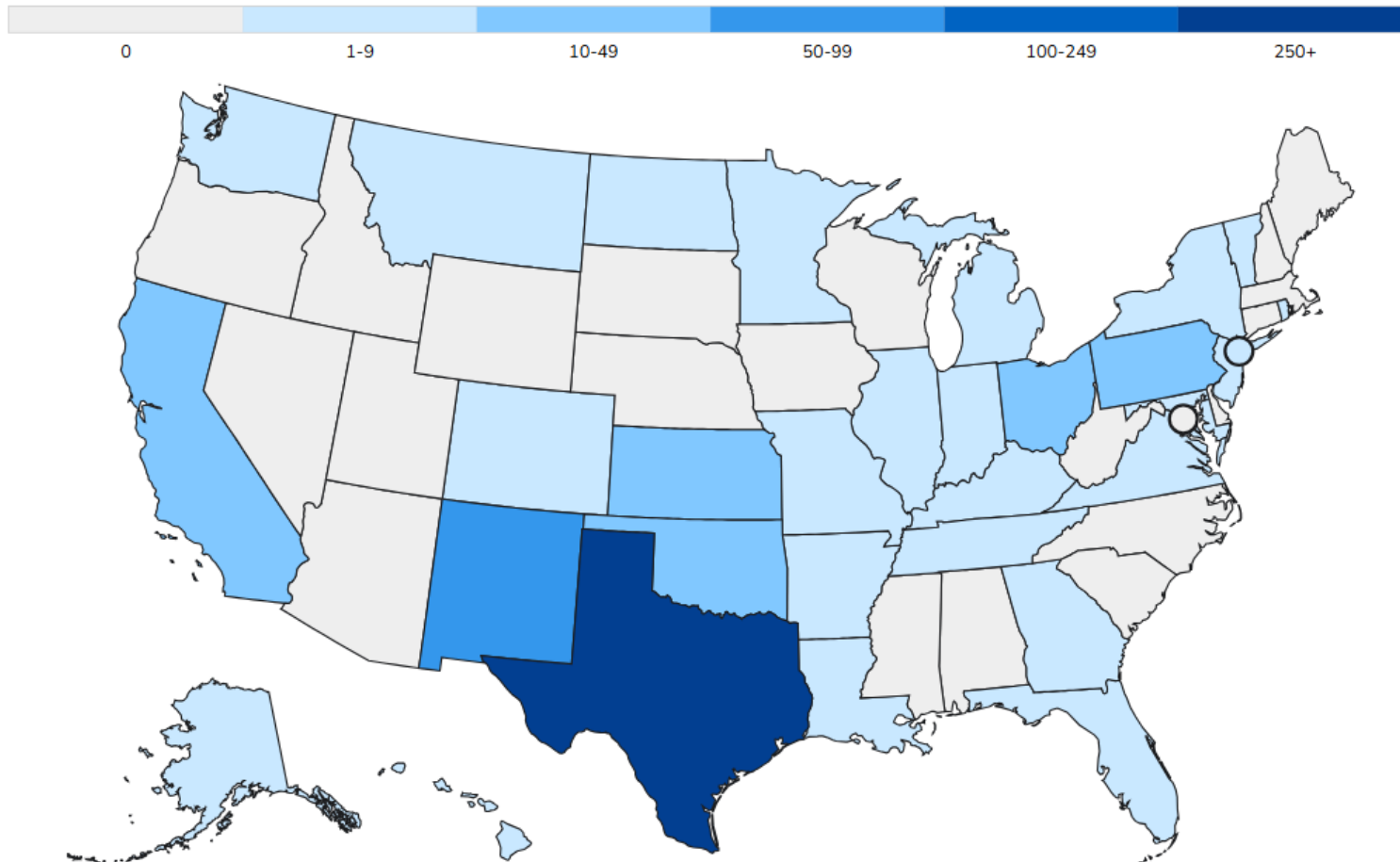
Mother's Day / Maternal Health



Advancing Maternal Health



Measles



Map of 2025 measles cases, courtesy of CDC: cdc.gov/measles/data-research/index.html



Massachusetts Department of Public Health

DPH Data Library

Carla Villacorta

Data Transformation & Partnerships Manager

Data Modernization Initiative, Commissioner's Office

Introducing the DPH Data Library

What?



Centralized
hub to
view all
published
DPH data

Why?



Improve access to
public health data &
support better
decision making &
transparency

For Whom?



For users across
government & for
the public

How the Library Delivers Value

❖ **Saves Time**

By offering a single reliable entry point for exploring public health data

❖ **Keeps the Public Informed**

By highlighting new data releases, emerging public health trends & seasonal topics

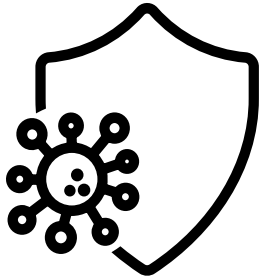
❖ **Connects Users to Specialized Tools**

Helps users find the right data tools for their needs – whether comparing trends, generating visuals or exploring local impacts



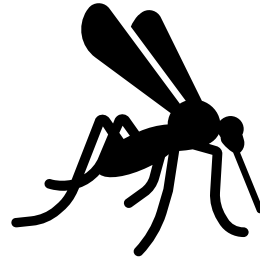
Real-World Uses of the DPH Data Library

School Immunization Rates



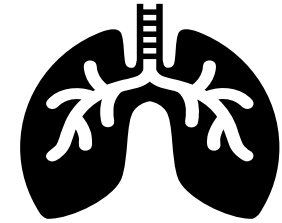
Parents can explore vaccination rates at their child's school to make informed health decisions

Seasonal Vector Data



Hikers & summer camp families can check tick & mosquito activity to plan safer outdoor activities

Chronic Disease Trends



Epidemiologists can analyze long-term data on conditions like asthma to identify disparities & inform health interventions

DPH Data Library Content

DPH Data Library has a collection of 230+ data resources, making public health information easier to find and use. Users can explore dashboards, reports, data briefs & datasets across major health topics.

Search By Public Health Topic Areas including:

Youth Health

**Health Care
Access**

**Maternal &
Infant Health**

**Births &
Deaths**

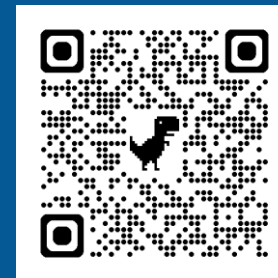
**Substance
Use &
Treatment
Services**

**Environmental
Health**

**Sexual &
Reproductive
Health**

DPH Data Library

Your go-to source for Massachusetts public health data



Scan for library



The Department of Public Health (DPH) Data Library is your gateway to an array of data about the health of Massachusetts residents and communities. Here you will find a catalog of dashboards, reports, datasets, and more, ready to download or export. The Data Library is for residents, policy makers, grant writers, researchers, and anyone interested in the topics we address.

Search for data by keyword(s)

Search for data by keyword(s)

SEARCH 

Try keywords, e.g. "flu", "hospital capacity", or "disease."

Other ways to start your search:

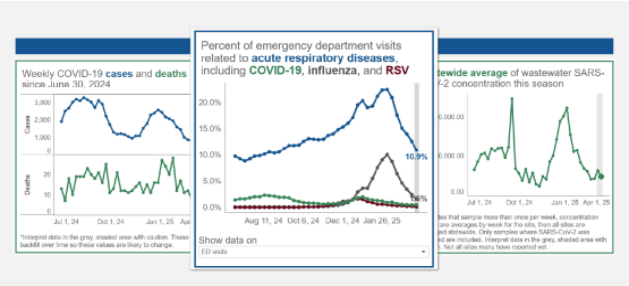
You can also [search by topic](#) or select a topic from the **featured data** below.

Featured Data

This section highlights timely, high-interest datasets that reflect what is most relevant to the public at any given time.

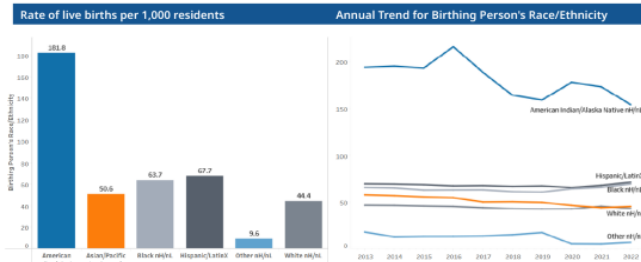
Viral Respiratory Illness Reporting

Data includes acute respiratory diseases, COVID-19, influenza (flu), and respiratory syncytial virus (RSV)



Birth Outcomes Data of Massachusetts Residents

Find data on births of Massachusetts residents.



School Immunization Data

Find information about school immunization requirements and data by school and county.

SCHOOL NAME	SCHOOL TYPE	MUNICIPALITY	COUNTY	4 DTAP	5 POLIO	1 MMR	3 HIB	5 HEP B	1 VARICELLA	SERIES
[CC] STEVENS STREET PRESCHOOL	PRIVATE	BARNSTABLE	BARNSTABLE	*	*	*	*	*	*	*
[CC] WEST MAIN PRESCHOOL	PRIVATE	BARNSTABLE	BARNSTABLE	*	*	*	*	*	*	*
ACADEMY OF EARLY LEARNING	PRIVATE	BARNSTABLE	BARNSTABLE	†	†	†	†	†	†	†
ACADEMY OF EARLY LEARNING LLC	PRIVATE	BARNSTABLE	BARNSTABLE	†	†	†				
BAPS/ BARNSTABLE- WEST-BARN.	PUBLIC	BARNSTABLE	BARNSTABLE	*	*	*				
BRIGHT PROMISES PRESCHOOL	PRIVATE	BARNSTABLE	BARNSTABLE	98%	98%	98%				
BUILDING BLOCKS CHILD CARE CENTER	PRIVATE	BARNSTABLE	BARNSTABLE	95%	100%	100%				
CAPE SYMPHONY	PRIVATE	BARNSTABLE	BARNSTABLE	*	*	*				

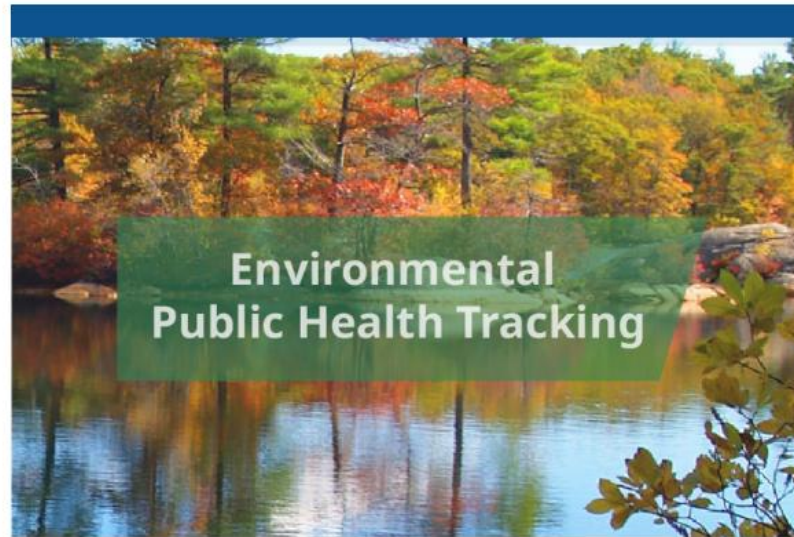
Interactive Data Tools

Interactive tools for accessing and exploring public health data.



Population Health Information Tool

Topics include births, deaths, diseases, substance addiction, & more.



Environmental Public Health Tracking

Data & information on environments & hazards, health effects, & population health.

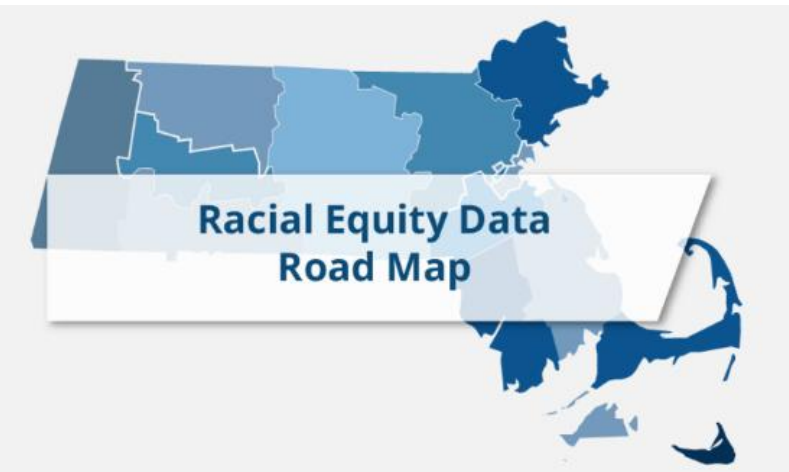


Massachusetts Health Data Tool

Data reports on health outcomes, population demographics, & social determinants of health.

Additional Resources

Guidance and best practices for advancing health equity through data.



Racial Equity Data Road Map

Ideas for using data to help close gaps in health outcomes by race and ethnicity



Health Equity Data Standards Program

Standards for collecting, exchanging, and reporting granular demographic data



Community Health Equity Initiative

A data initiative with local and state partners to drive decision-making and advance health equity

Ongoing Improvement & Enhancements

Promote Consistency



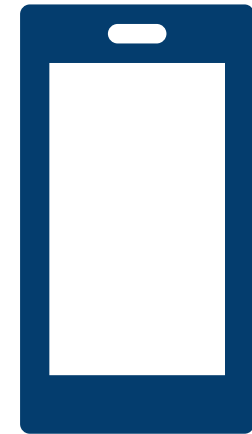
Polish layout, language & design to ensure cohesion across DPH webpages.

Refine Search & Structure



Revise how content is labeled and structured to improve search accuracy.

New Features



Enhanced filtering tools, mobile-friendly layouts, interactive charts, and feedback forms.

Thank you for the opportunity to present this information today.

Please direct any questions to:

Carla Villacorta

Data Transformation & Partnerships Manager

Data Modernization Initiative, Commissioner's Office

DPHDataModernization@mass.gov

Questions?





Massachusetts Department of Public Health

Appendix - DPH Data Library

Population Health Information Tool

A searchable resource for exploring Massachusetts population health data by topic or population group.

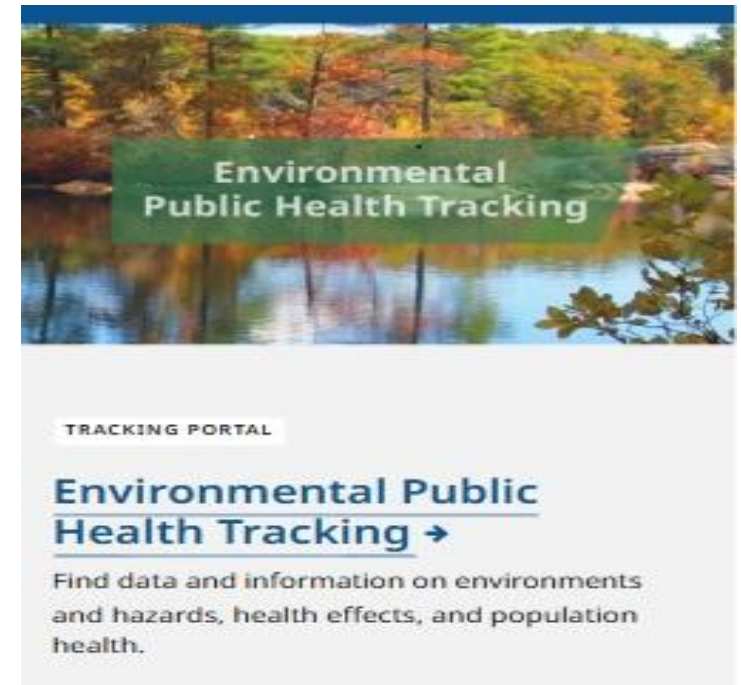
- ❖ Search by Population includes:
 - Race and Hispanic ethnicity
 - Sexual orientation
 - Housing Status
- ❖ Search by health topics such as:
 - Cancer incidence
 - Birth and death data
 - Substance addiction treatment



Environmental Public Health Tracking Tool

A web-based resource for viewing environmental and related health data by location across Massachusetts

- ❖ Environmental data includes: climate change, drinking water quality, and indoor air quality.
- ❖ Related health data includes: ALS, asthma and birth defects.
- ❖ Inspection data includes: lead inspections in residential settings.



Massachusetts Health Data Tool

A centralized platform for exploring health data by community or statewide.

- ❖ Browse reports by location including: cities, towns and counties
- ❖ Explore data indicators on health outcomes, population demographics and social determinants of health
- ❖ Access downloadable reports and visualizations including community reports, state report and map room.





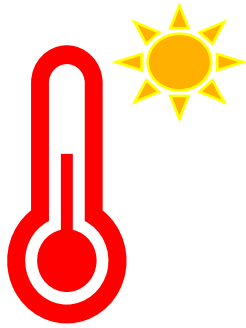
Massachusetts Department of Public Health

Unhealthy Heat Threshold for Heat Advisories 2025

May 14, 2025

Darien Mather, MPH, *Lead/Epi III*
Kate Adams, ScD, *Senior Epidemiologist/Epi II*
Climate & Special Projects Program
Division of Environmental Epidemiology
Bureau of Climate & Environmental Health

Presentation Overview



Introduction & 2024 Summary



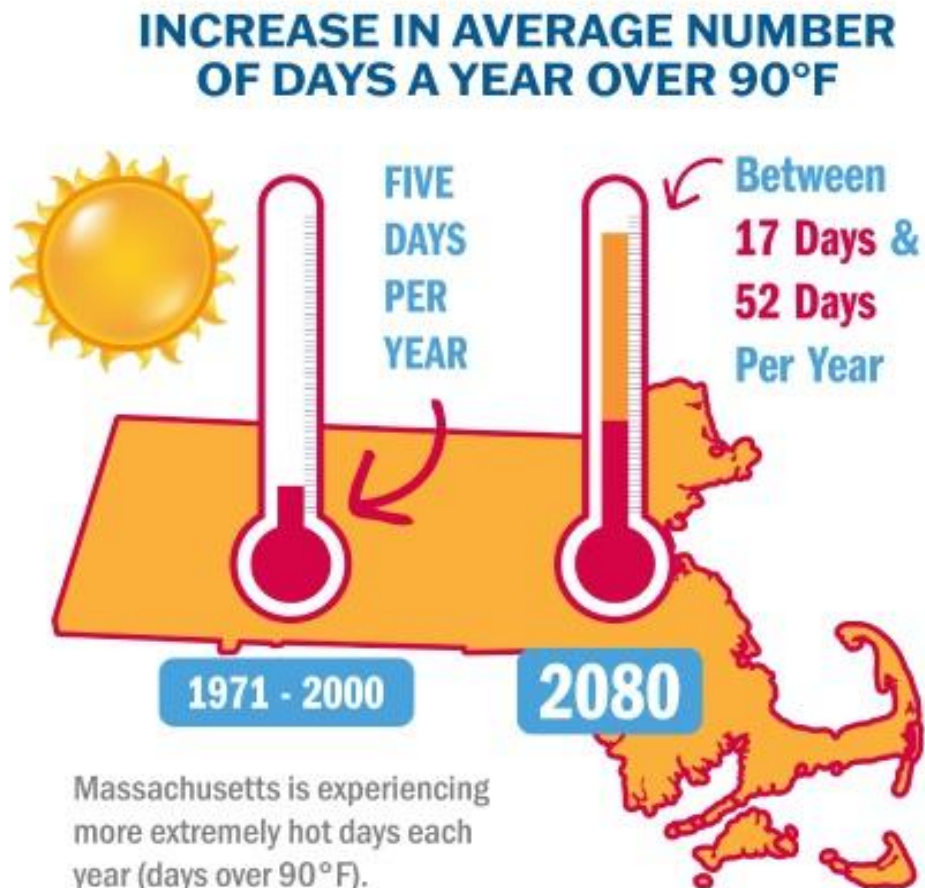
**Defining Unhealthy Heat
Thresholds for MA**



2025 HEAT Response Initiative

Extreme Heat in MA

Temperature change in Boston 1850-2020



Temperatures have risen ~ 3.5°F

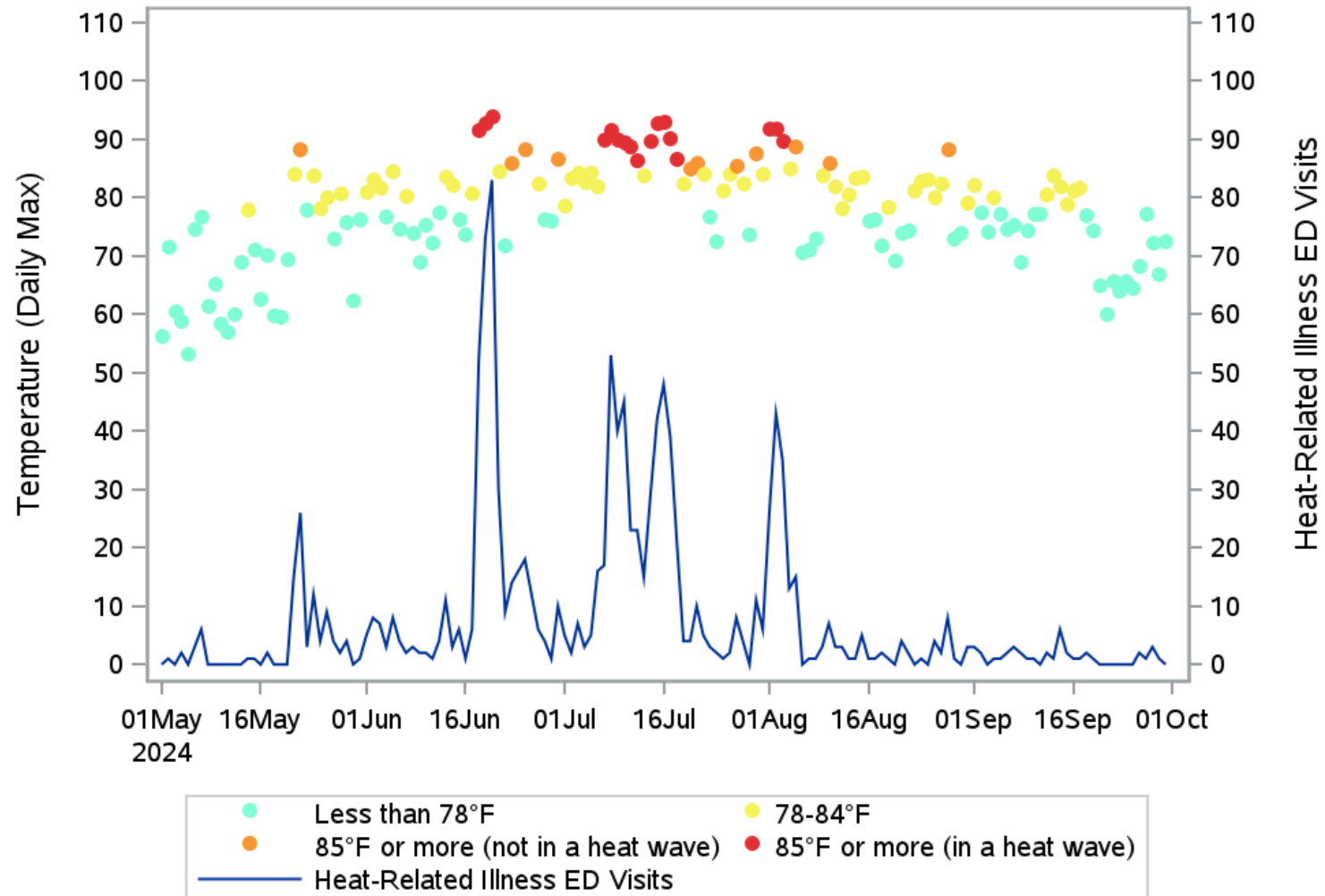
Average number of days over 90°F in a year are increasing: Currently ~10 days per year (2017-2024)

~750 heat stress emergency department visits annually (2017-2021)

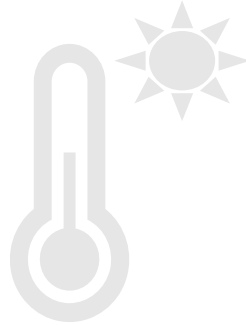
Nearly 30 heat-related deaths in MA (2015-2024)

Snapshot of the 2024 HEAT Season

Daily Max Temperature Unhealthy Heat Classification and Heat-Related Illness ED Visits in MA, May-Sept. 2024



Presentation Overview



Introduction & 2024 Summary



**Defining Unhealthy Heat
Thresholds for MA**



2025 HEAT Response Initiative

Developing an Unhealthy Heat Threshold

Agency/Source	Measure	Numeric Threshold	Duration
NWS (Boston)	Heat Index	100-104°F, or 95-99°F	2+ hours on 1 day, or 2+ hours on 2 back-to-back days
City of Boston	Heat Index	95°F	2+ back-to-back days
FEMA	Temperature	90°F	2+ back-to-back days
Wellenius et al (New Hampshire, Maine, and Rhode Island)	Heat Index	Significant elevation of ED visits at HI=95°F versus 75°F (RR=1.08)	Cumulative lag 0-7 days
Vaidyanathan et al (Northeast)	Heat Index	85-90°F for all cause hospitalization, 90-95°F for select causes	Single day maximum

Linear Modeling: Data

Population-weighted daily maximum temperature

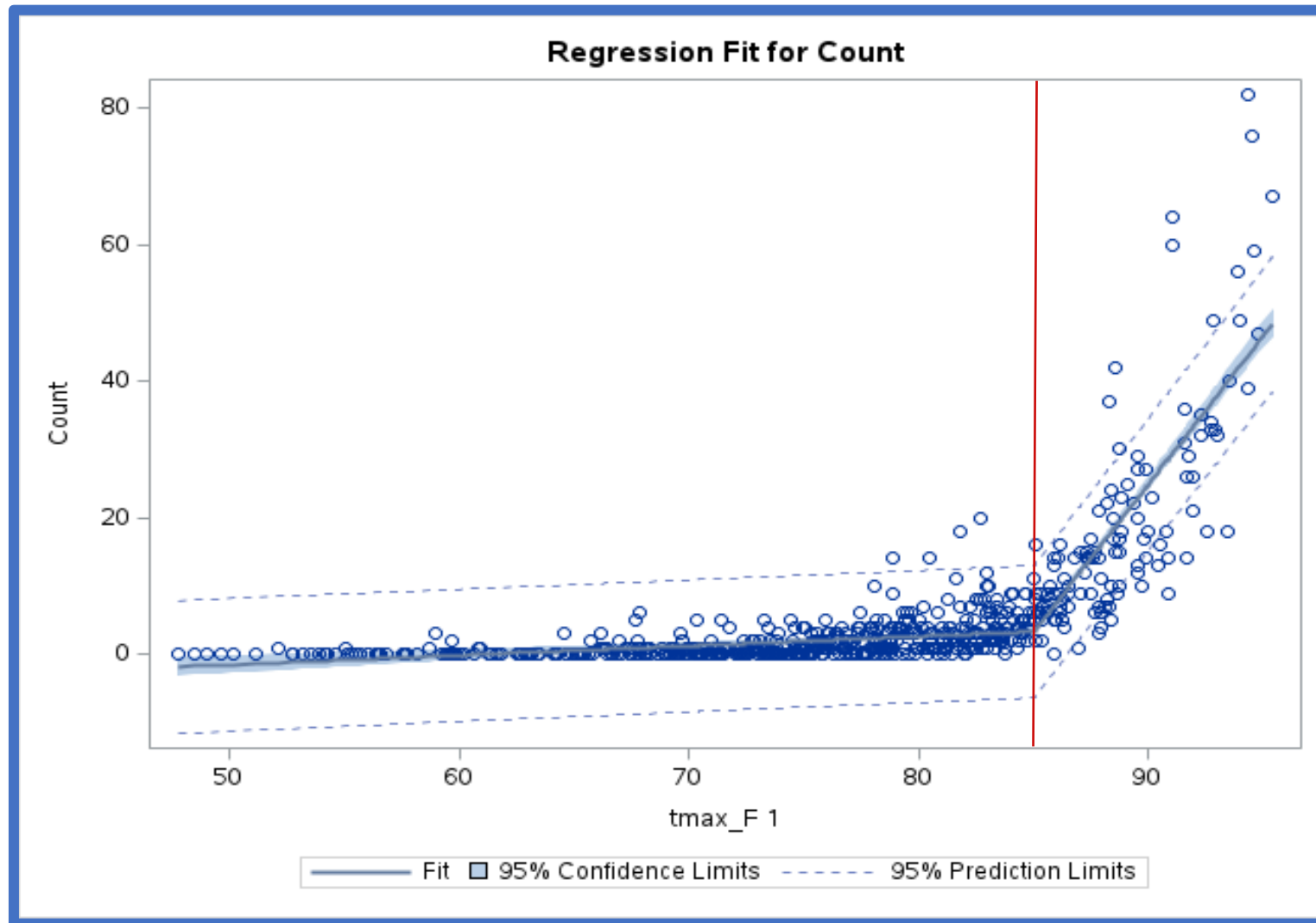
- [PRISM](#) website for meteorological data*
- ~4km grid modeled from observations
- Population weighted average for all of MA

ED visit counts for heat stress

- Case-mix data from CHIA via [EPHT](#)*
- ICD-10-CM diagnosis codes T67, X30, or X32
- May 1 to September 30 only

*Data for years 2017, 2018, 2019 and 2021; May 1 through September 30 only

Linear Modeling: Spline Models



- Small circles = daily observations
- Vertical line = 85°F
- Adjusted R-squared = 0.76

Linear Modeling: Results

Covariates for multivariate modeling:

- Maximum Temperature
- # of days with Temperature $\geq 85^{\circ}\text{F}$
- Weekend or Holiday
- Week of Summer
 - Attenuates as the summer progresses, meaning that earlier heat events are more dangerous
- Overnight Low Temperature $\geq 70^{\circ}\text{F}$
 - Impacts risk when high temperatures are $<85^{\circ}\text{F}$

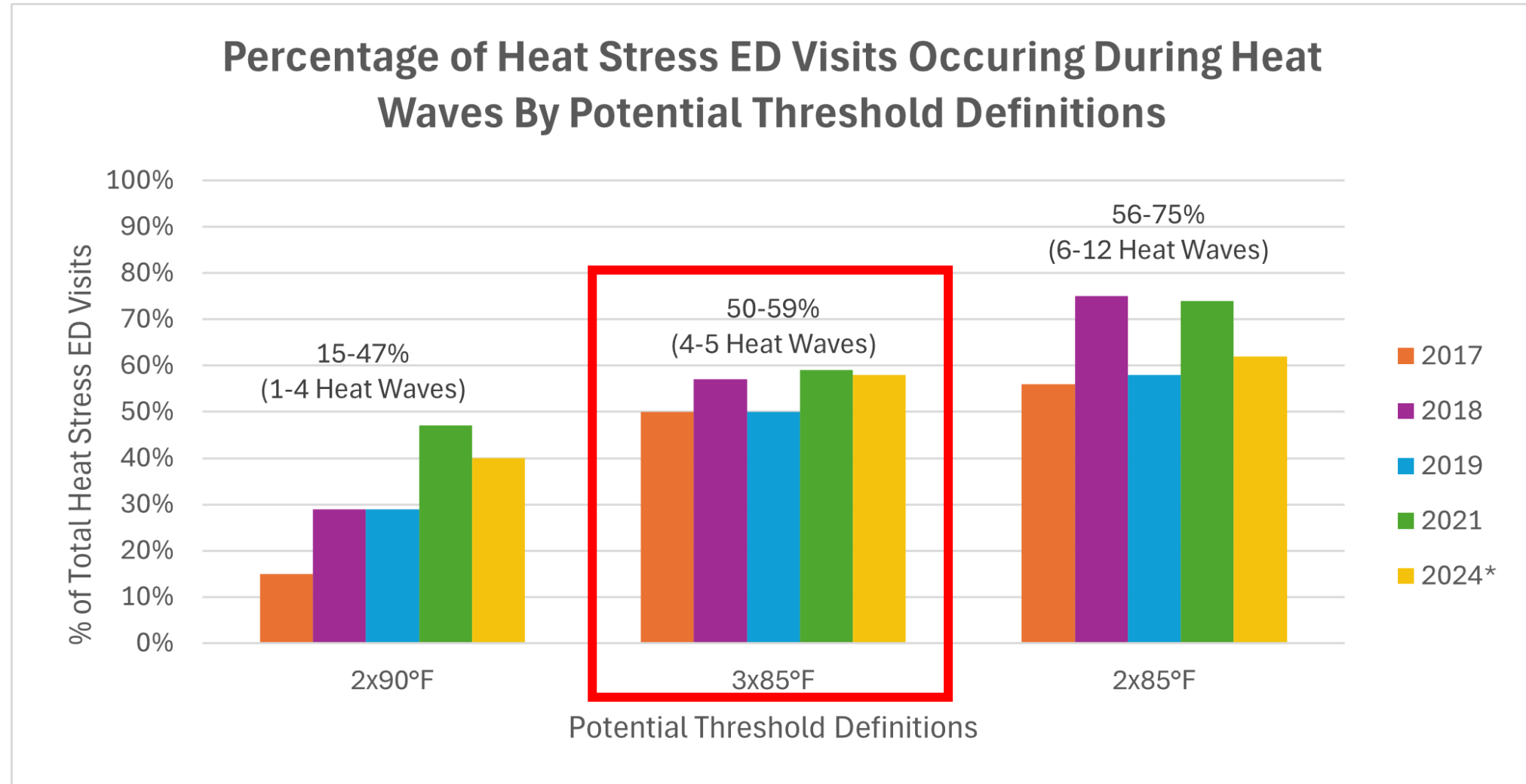


Hypothetical Example: First Heat is the Worst Heat

We used linear modeling results to predict heat wave impacts in early- versus mid-summer:

High Temp, °F	Estimated Heat Stress ED Visits	
	Mid-May (Week 3)	Late July (Week 12)
87	13	8
91	33	27
96	57	51
95	54	49
86	16	11
Total Visits	173	145

Alignment of Potential Thresholds with ED Visits



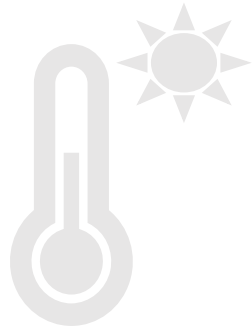
*Data for 2024 is of heat-related illness ED visits from the MDPH Syndromic Surveillance Program

Temperature Thresholds vs. Heat Stress ED Visits

Risk Category	Days/Season		% of Seasonal ED Visits*	Mean ED Visits/Day
	#	%		
3x85°F+ (Heat Wave) <i>Red – High Risk</i>	17	11%	55%	26
85°F+ (NOT in a Heat Wave) <i>Orange – Moderate Risk</i>	13	8%	18%	10
78-84°F <i>Yellow – Low Risk</i>	46	30%	20%	4
<78°F <i>Green – Minimal Risk</i>	78	50%	7%	1

*Aggregate percentage across 2017-2019, & 2021

Presentation Overview



Introduction & 2024 Summary



Defining Unhealthy Heat
Thresholds for MA



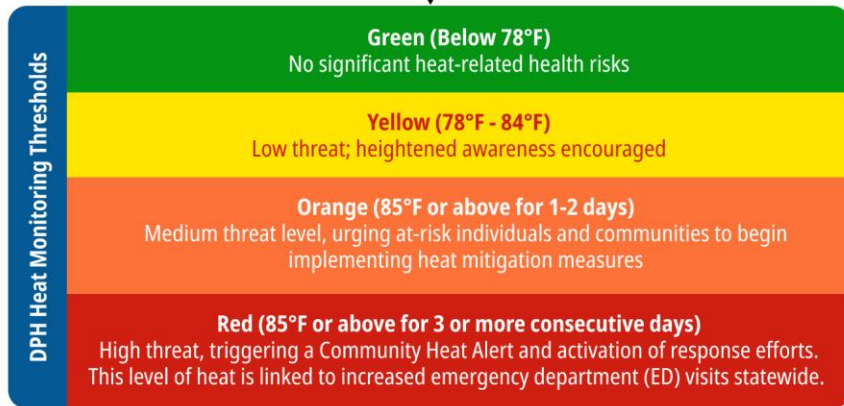
2025 HEAT Response Initiative

2025 HEAT Response

Unhealthy Heat Alert Trigger Decision Tree

Check the Unhealthy Heat Forecast

Daily monitoring starts 08:00 am. Go on mass.gov/unhealthy-heat and view the forecast dashboard. (tool has 7 day maximum)



Does the Unhealthy Heat Forecast webpage show a forecast for unhealthy heatwave in the next 7 days?

Yes

Activate Alerts

No

No Alerts Sent

Vulnerable populations and stakeholders can monitor the Unhealthy Heat Forecast to remain up to date on the current heat threshold and read educational resources.

Healthcare Sector

Long-term Care Facilities

Local Boards of Health

Health Equity Partners

Correctional Facilities

Outdoor Recreation Camps

Farm Labor Camps

DCR Partners for Pool Operators

Unhealthy Heat Forecast Web Page for Daily Updates

Massachusetts Unhealthy Heat Forecast

Stay informed with real-time heat forecasts and community resources to help you plan, prepare, and respond to unhealthy heat in Massachusetts.

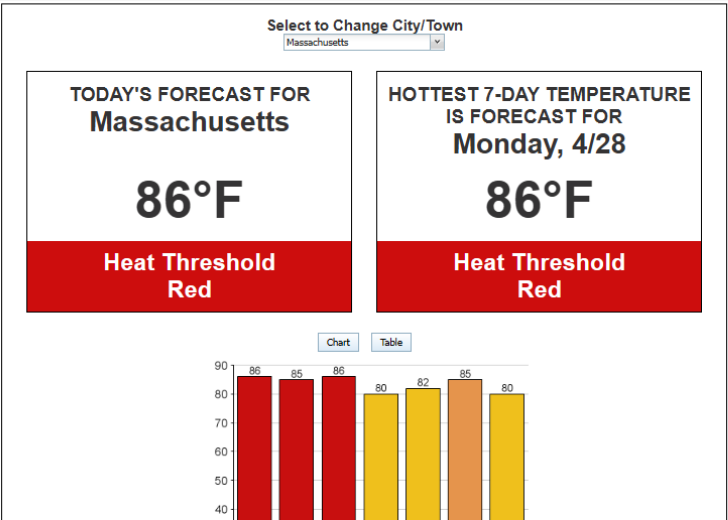


THERE IS AN UNHEALTHY HEAT ALERT FOR 4/28- 4/30

Alert Updated: 04/28/2025

Unhealthy Heat Forecast

The heat forecasting widget allows Massachusetts residents to view real-time and forecasted temperatures for their community. Use the drop down menu to select a specific location or view statewide data by default. The dashboard displays today's current temperature, the highest forecasted temperature over the next 7 days (with the expected date), and a bar graph showing daily high temperatures—yellow for temperatures below 85°F and orange for temperatures above 85°F. This tool helps residents quickly assess heat risk levels and plan accordingly.



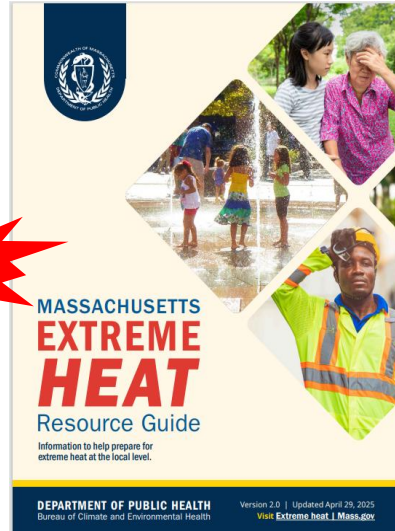
<https://www.mass.gov/info-details/massachusetts-unhealthy-heat-forecast>



2025 Plans – HEAT (Heat Education Alert Tool)



New



Resource Guide and
Advisory Fact Sheets

Quick links



New

[Mass.gov/extreme-heat](https://mass.gov/extreme-heat)



HHAN
& CBO
Alerts

New



Unhealthy Heat Forecast tool



Environmental Health Equity and Climate
Modules

Summary

- Planning for summer heat is important to protect public health
- Developing Massachusetts-specific thresholds and risk levels protects residents better than national alert levels
- Plans for the 2025 Season were informed by data analysis findings
- DPH is collaborating with other bureaus and offices, internally, and with other agencies, municipalities, and organizations, externally, to promote awareness of unhealthy heat and response planning

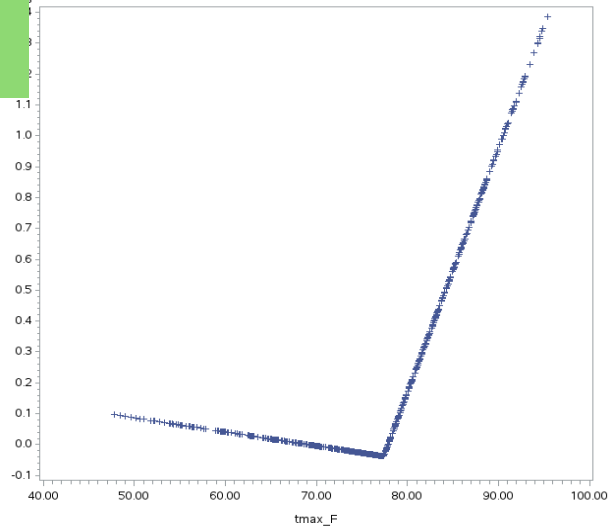


Massachusetts Department of Public Health

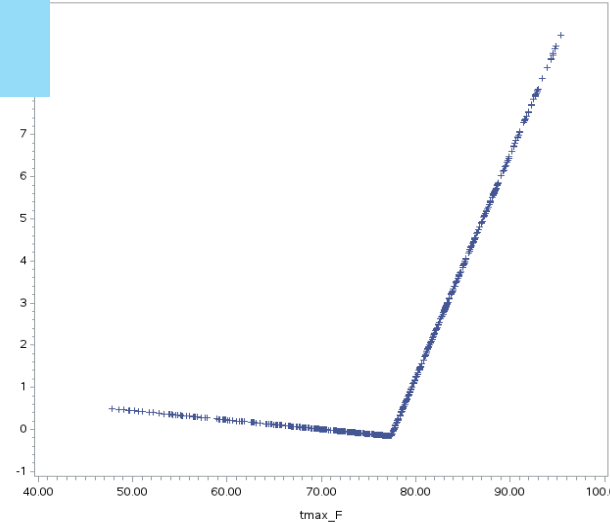
THANK YOU

Heat Impact Consistency Across MA Regions

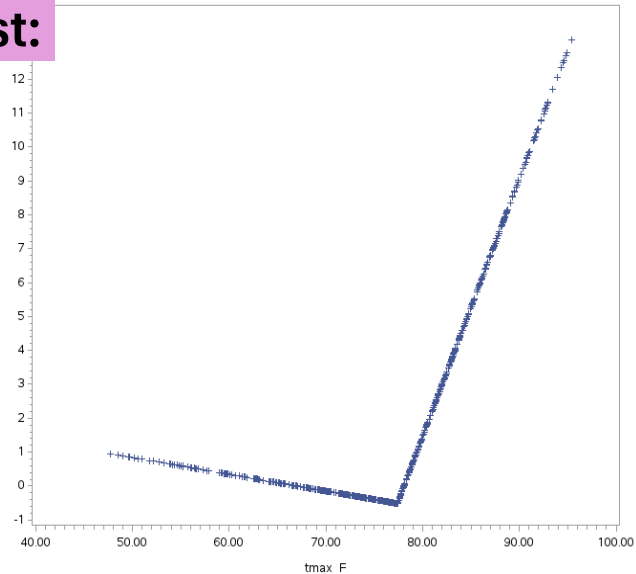
Cape and Islands:



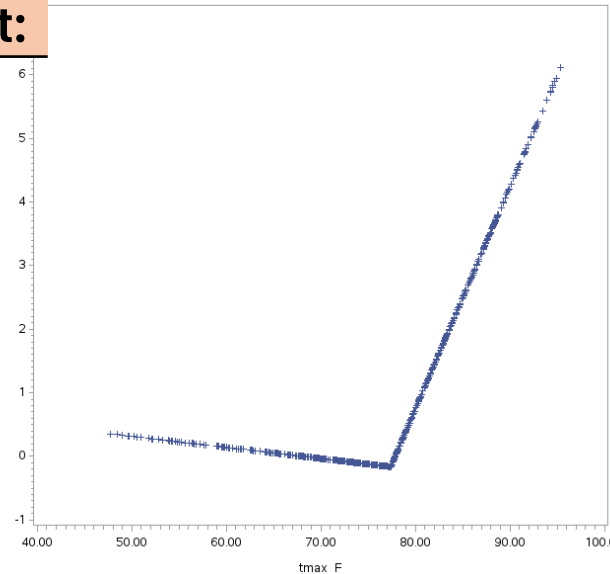
West/Central:



Northeast:



Southeast:



Results from single-knot splined linear regression by region for the daily number of ED visits for heat illness versus state-wide population weighted daily maximum temperature.

For all regions, the model predicted that daily ED visit counts begin increasing with temperature (from 0 visits) around 77-78F.

Linear Modeling: Multivariate Split-Sample Results

Variable	Estimated Impact on Heat Stress ED Visits	
	85°F and Above	Under 85°F
Daily High Temp, °F	+4.4 per degree	+0.18 per degree
Week of Summer (Week of May 1 = Week 1)	-0.6 x week number	-0.01 x week number
Weekend or Holiday (non-holiday weekdays = 0)	+6.7 per day	+0.7 per day
Consecutive Day of Maximum Temperature 85°F or Above	+1.8 x day number	N/A
Daily Low Temperature 70°F or Above	N/A	+5.3 cases per day



Massachusetts Department of Public Health

Next Meeting:
Wednesday, June 11, 2025