



The Power of an Interdisciplinary Clinical Team

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Supporting Local Public Health in an Evolving Environment

Acknowledgement that PHNs have traditionally carried much of the communicable disease work in local jurisdictions while more and more is being asked of them....



Presentation Objective:
**Strengthening Massachusetts Public Health Through
Collaborative Disease Investigation
and Community Service**

The Challenge & Opportunities – Communicable and Infectious Disease in Massachusetts

- **Current public health landscape in Massachusetts as a home rule state**
- **Complexity of disease investigation**
 - MAVEN, MIIS, food facilities, marine & environmental response
- **Need for trained and qualified staff**
 - Collect and disseminate local and regional reporting, data visualization, dashboards
- **Need for a coordinated response**
 - Data to action
- **Impact on community health outcomes**

Data Resources are Plentiful but Require Diligence

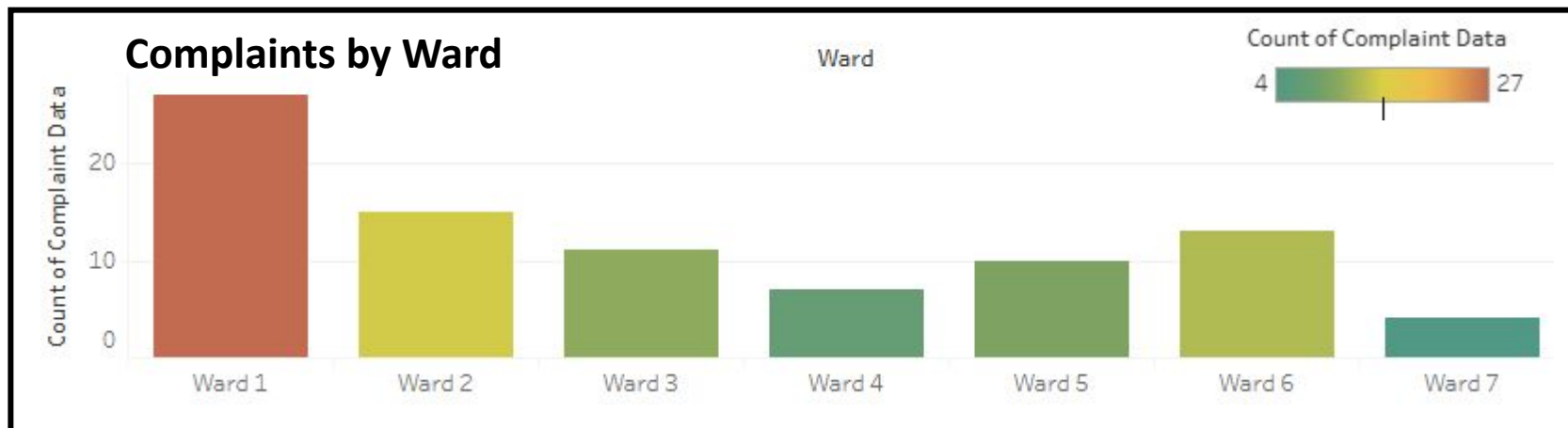
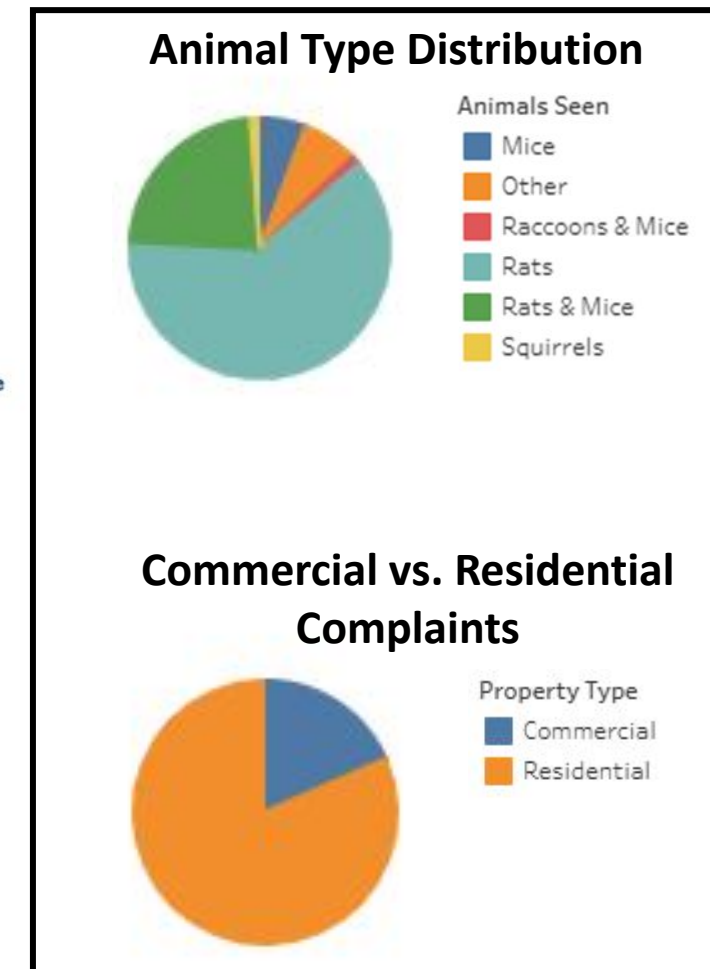
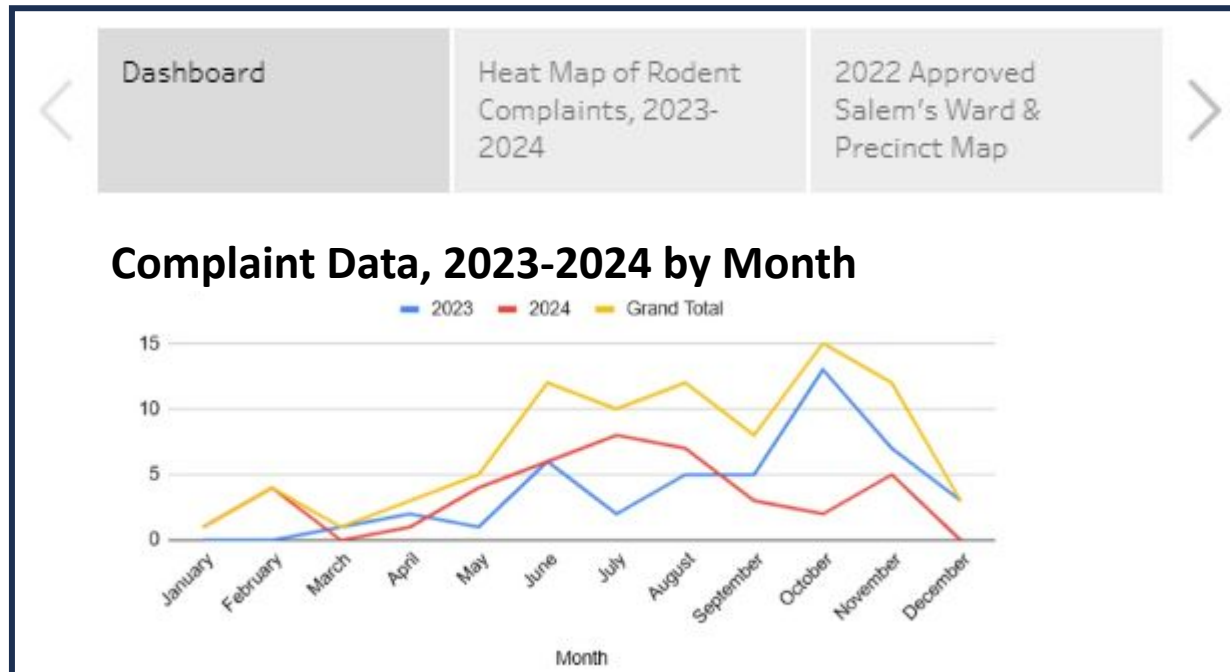
Some Examples

- **MAVEN – What it is:** MASSachusetts Virtual Epidemiologic Network
 - Infectious disease surveillance system for Massachusetts.
 - Data collected by the Bureau of Infectious Disease and Laboratory Sciences (BIDLS) & local health are maintained in MAVEN. It contains epidemiological, clinical, laboratory, and case management data utilized for case investigation and surveillance purposes on approximately 90 reportable infectious diseases.
- Surveillance for **Chronic Diseases** ([Bureau of Community Health & Prevention](#))
- **Cancer** Surveillance ([MA Cancer Registry](#))
- **Vaccine Registry** ([Massachusetts Immunization Information System](#) (MIIS))
- **State and Community Data Reports** on health outcomes, population demographics, social determinants of health and more ([MA Health Data Tool](#))
- **METRIK** (local public health data solution - [coming soon!](#))
- Many More!



Sample Dashboards:

Rodent Complaints Dashboard, Salem MA 2023-2024



<https://www.salemma.gov/1233/Rodent-Control-Information>

Sample Dashboards:

Maternal and Child Health in Worcester MA

- About This Dashboard
 - Dashboard Site Map
- Maternal Health
 - Prenatal Care Access and Utilization
 - Maternal Mortality and Morbidity
 - Perinatal Mental Health & Substance Misuse
- Birth Characteristics & Outcomes
 - Birth Rates
 - Birth Method
 - Gestational Age
 - Birth Weight
- Child Health
 - Healthcare Access and Utilization
 - Health and Wellbeing
 - Social Determinants
- MCH Data Resources

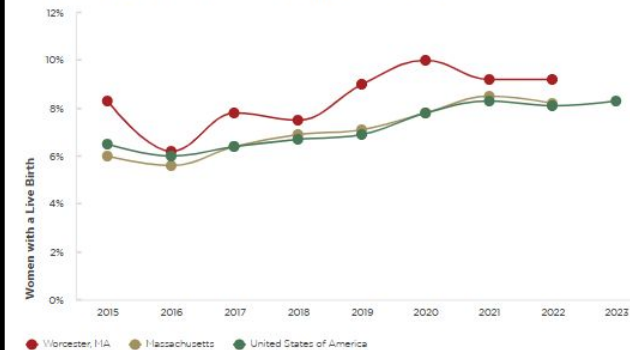


- Green - United States
- Gold - Massachusetts
- Blue - Worcester County
- Red - City of Worcester

9.2%
Women with live births
Gestational Diabetes
Worcester, MA (2022)

Source: Mass DPH (<https://www.mass.gov/info-details/birth-outcomes-data-of-massachusetts-residents>).
Updated Manually

Prevalence of Gestational Diabetes During Pregnancy



Source: Massachusetts DPH (<https://www.mass.gov/info-details/birth-outcomes-data-of-massachusetts-residents>), CDC National Vital Statistics Reports, Final Birth Data (<https://www.cdc.gov/nchs/products/nvsr.htm>)

1,165
Females per 1 OBGYN
Obstetrics/Gynaecology
(OBGYN) Ratio
Worcester, MA
2024

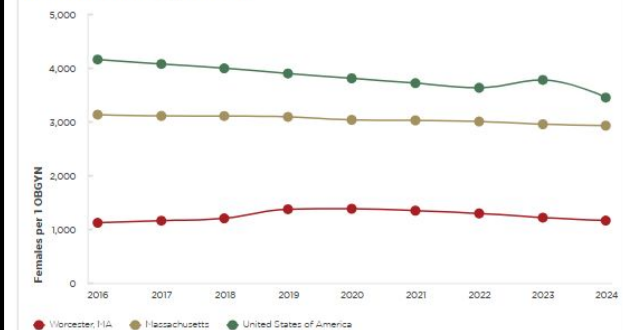
Sources: NPPES NPI
Automatically Updated

6,031
Females per 1 Midwife or Doula
Midwife and Doula Ratio
Worcester, MA
2024

Female Population per OBGYN by Region

Female Population per OBGYN by Region

Number of Females per OBGYN



Sources: NPPES NPI
Automatically Updated

Note: The data presented on maternal health providers is limited by the care provider categories outlined in the National Plan and Provider Enumeration System (NPPES), it may not be representative of the maternal care provided by family physicians in Worcester, MA.

<https://dashboards.mysidewalk.com/maternal-child-health-worcester/>

Sample Dashboards: Greater Boroughs Partnership for Health



Greater Boroughs
Partnership for Health

Epidemiology Updates

Every two weeks our Epidemiologist puts together an update about what's going around and what you can do to stay healthy. The information on this page primarily focuses on routine infectious disease like seasonal influenza, but also keeps you informed on any emerging disease trends. The goal is to break down what's going on and give our communities the resources and information to be able to live their healthiest life.



Bi-Weekly Epi Update

Tuesday, October 7th, 2025

Top Highlights:

The leaves are turning and there is a crisp in the air, or at least every couple of days there is. Similar to the weather, there is a little bit of back and forth between summer and fall with mosquitoes still on the radar and flu creeping in. So here are the highlights:

- WNV risk is still elevated, so keep practicing mosquito precautions when possible
- Tick activity has slowed, but will likely peak one more time before winter. So do a tick check after your fall foliage walk.
- Respiratory season is at a slow start, so now is a good time to make a plan to get vaccinated.

Arbovirus Update

Based on the last dashboard update on September 30th, there have been 451 total WNV positive mosquito samples and 8 human cases in Massachusetts. In the GBPH region, there have been a total of 10 WNV positive samples during the summer. Now, the risk level has been elevated to "High" in all four towns in the GBPH region due to increasing WNV positive samples in surrounding towns. So far there still have been no human cases reported in Boylston, Northborough, Southborough, or Westborough.



With the increase to high risk in all four towns there are additional recommended precautions to reduce the risk of transmission. Ideally personal precautions are implemented throughout the day whenever going outside. Unfortunately mosquitoes like to stick around even in to the fall and risk still does exist. The good news is that as the temperatures start to cool the activity should start to slow down. So while we enjoy the nice fall weather, be sure to take a few extra steps to prevent mosquito bites while our risk is still high.

Risk Level	What it Means	What you can do
High	Infection with WNV and EEE is likely or has already occurred	To Prevent: • Wear mosquito repellent. (any time you are outside) • Wear long sleeves and long pants (when weather permits) • Use netting on baby carriages and playpens • Dump standing water 2 times a week • People over 50 years old or that are immunocompromised should consider adjusting activities to avoid being outside during peak mosquito activity (dawn and dusk)

State Data Source: MA DPH Arbovirus Risk Maps

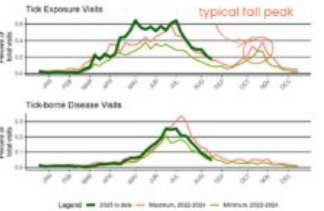


Bi-Weekly Epi Update

Tuesday, October 7th, 2025

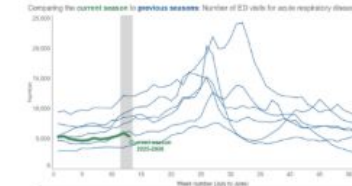
Ticks Borne disease

In August, there was a continued decrease in tick borne exposures and disease visits to the ER. We are on track with what we typically expect to see around this time of year. That also means there will likely be a second peak around October and November when ticks become active right before winter. So while summer is winding down, ticks will probably stick around well in to fall. It's important to remind our communities to continue tick precautions as we enjoy the fall foliage.



Keeping an eye on Respiratory Illness

We are currently still on a plateau with Respiratory illness. Levels are slightly elevated, but not increasing. The primary drivers have been the late summer COVID wave and general colds that have been going around. Flu and RSV are still relatively quiet, although there is some early RSV activity in the Southeast region (think Florida). Typically we see activity in that region, then it works its way up the coast to our area.



Locally, trends in Massachusetts mirror what we are seeing nationally. Cases, especially for COVID, are slightly elevated, but not increasing. There is also a trickle of early flu and RSV cases. As we move into respiratory season, getting vaccinated and practicing some simple precautions can help individuals and communities stay healthy.

Vaccine Clinics:

On Saturday, October 4th, we provided over 200 vaccines to GBPH residents! Our next clinics are:
 10/9- Boylston Town House 11-1pm and 4-6pm
 10/14- Northborough Town Hall 1-3pm and 4-6pm
 10/27- Westborough Town Hall 11am-3pm

*Depending on availability we may be add clinics for schools, or provide additional home bound vaccines

Monthly Tick-borne Disease Reports

Weekly US Influenza Surveillance Report Week 38 ending in September 20, 2025

<https://www.town.northborough.ma.us/greater-boroughs-partnership-health/pages/epidemiology-updates>

The Interdisciplinary Clinical Team

- **Local Public Health Nurse:** brings clinical expertise and patient care experience
- **Local Epidemiologist:** research skills, data analysis, skills in tracking disease trends, often health education and communication
- **Community Health Worker:** outreach, cultural responsiveness and mediation, community resource connections and navigations, advocacy, public health application, and community capacity building



Note: The examples today discuss **PHNs, Epis, and CHWs**, but the titles and staffing options available to local health when creating interdisciplinary teams can include a wide variety of other positions such as **health agents, health educators, analysts, public health specialists, contact tracers, etc.**

Local Public Health Nurses – The Clinical Foundation

- **Key Responsibilities in Disease Investigations:**
 - Case review and clinical assessment
 - Creating health care plans
 - Contact tracing and follow-up as necessary
 - Health education and counseling
 - Infection control guidance
- **Unique Contributions:** Clinical experience, patient advocacy, care coordination

Local Epidemiologists – The Data Detectives

- **Key Responsibilities in Disease Investigations:**
 - Disease surveillance and monitoring
 - Case Investigation, Contact Tracing, and Follow-up
 - Outbreak investigation and analysis
 - Risk assessment and communication statistical modeling
 - Trend identification, data reporting, and interpretation
 - Program design & program evaluation
- **Unique Contributions:** Research skills, data analysis, identifying and tracking disease trends

Community Health Worker – The Community Bridge

- **Key Responsibilities in Disease Investigations:**
 - Cultural mediation and interpretation
 - Community outreach and engagement
 - Resource navigation and support
 - Health promotion and education
- **Unique Contributions:** Cultural competency, trust building, community access

The Power of Collaboration – Synergistic Approach



PHN, Epi & CHW core competencies create individual strengths which empower a collaborative team



Working as an interdisciplinary clinical team amplifies each discipline's effectiveness



Start by meeting and working towards shared goals with a common mission and objective

Team Approach: Routinize Casework Across the Team

- **The goal of an interdisciplinary team** is to support PHNs in working to the “top of their license.” Partnership on non-clinical tasks is critical in maximizing PHN resources and impact.
- **MAVEN** has built in “local supervisory review” workflow features to allow for establishing local or regional oversight mechanisms.
 - **Ex,** Case assignment to specific staff, and final review sign off by others.
- **Epidemiologists** can perform MAVEN work, case investigation, and follow-up activities, as well as reporting and data analysis.
- **CHWs** can provide linkages to community resources and assist in outreach to identified communities.

Scenario: Foodhandler tests positive for a reportable infectious disease.

- Depending on the pathogen, public health response can be quite detailed and may include follow-up with the case, contact tracing, follow-up with the place of work (restaurant) and additional restaurant staff, press releases to the public, and potential post-exposure actions. (Vaccine administration or stool specimen for clearance, etc. as applicable.)
- **Local Team Approach Examples:**
 - **PHN:** Index case interviews, specimen collection coordination/vaccination coordination and administration.
 - **Epi:** Drafting communications and press releases, tracking specimens, ensuring data completion and communication with DPH. Identifying at-risk communities (reviewing vaccination coverage reports).
 - **CHW:** Culturally and linguistically appropriate communication with additional restaurant staff regarding exposure, return to work guidance (specimen collection/post-exposure Vaccination/ or other clearance requirements). Linkage to community resources for assistance/wrap around services.

Interdisciplinary Teams in Action



Celeste Gearhart, BSN, RN
Director of Public Health Nursing

Ella Fernando, BSN, RN
Public Health Nurse

Larissa Loschiavo
Regional Clinical Community Health
Worker

Maia Fulton-Black
Regional Epidemiologist Consultant

MRC Volunteers (Pictured Later):
Kathy Foley
Jai Puthenveetti
Colin Goodbred

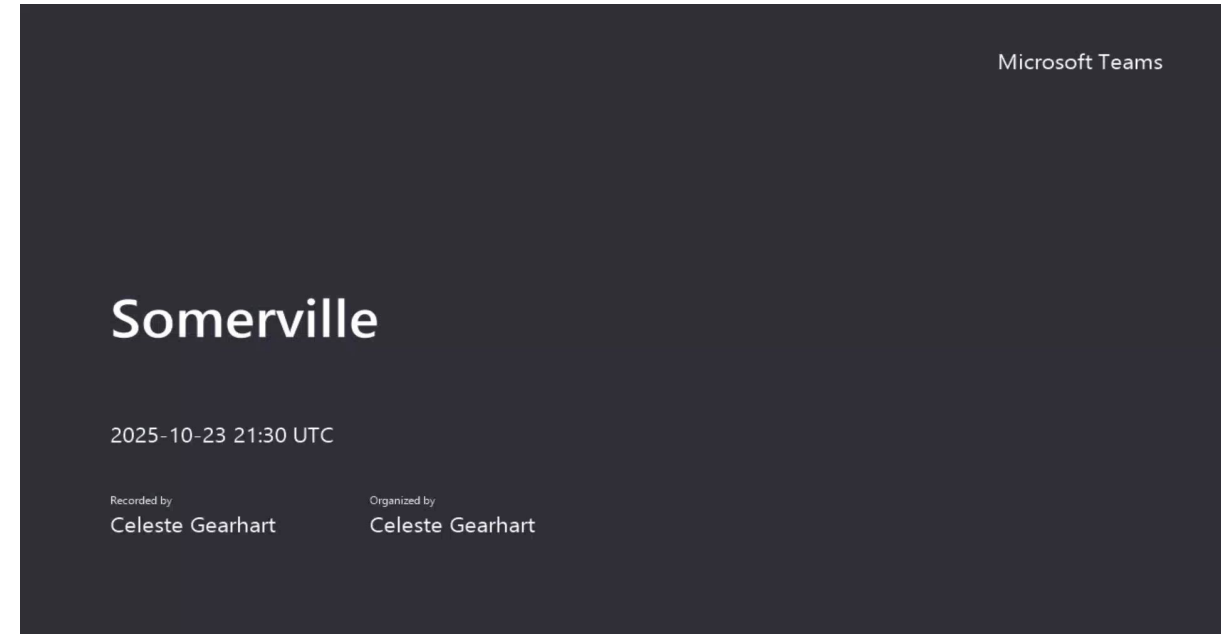
Somerville Nursing Department's Interdisciplinary Team

- **Staff**

- Director of Public Health Nursing
- Public Health Nurse
- Regional Epidemiologist (CTC grant-funded)
- Regional Clinical Community Health Worker (PHE grant-funded)
- Seasonal PT Vaccine Nurse (vax revolving account funded)

- **Partners**

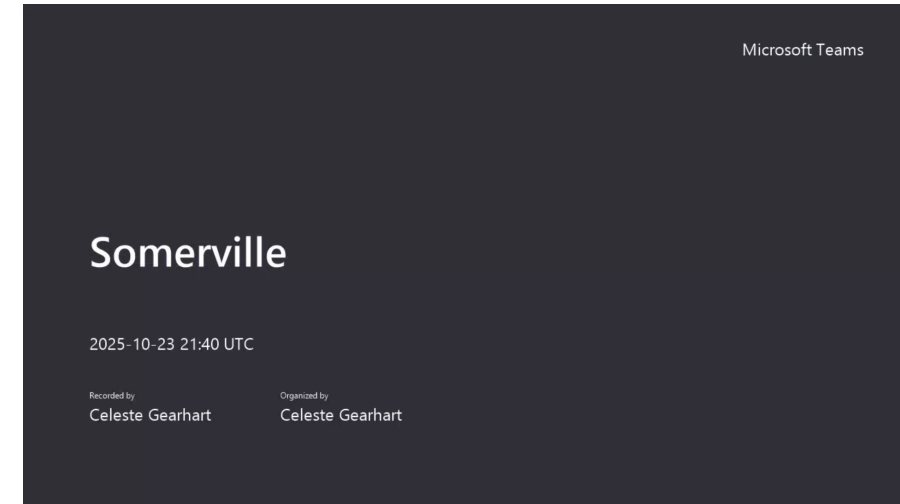
- Other City Departments
- Community Partners
- Metro East MRC



Somerville's Team and MAVEN Delegation

- **Epidemiologist**

- Infectious Disease Case Reports
- Interprets Data Trends
- Initial MAVEN investigations



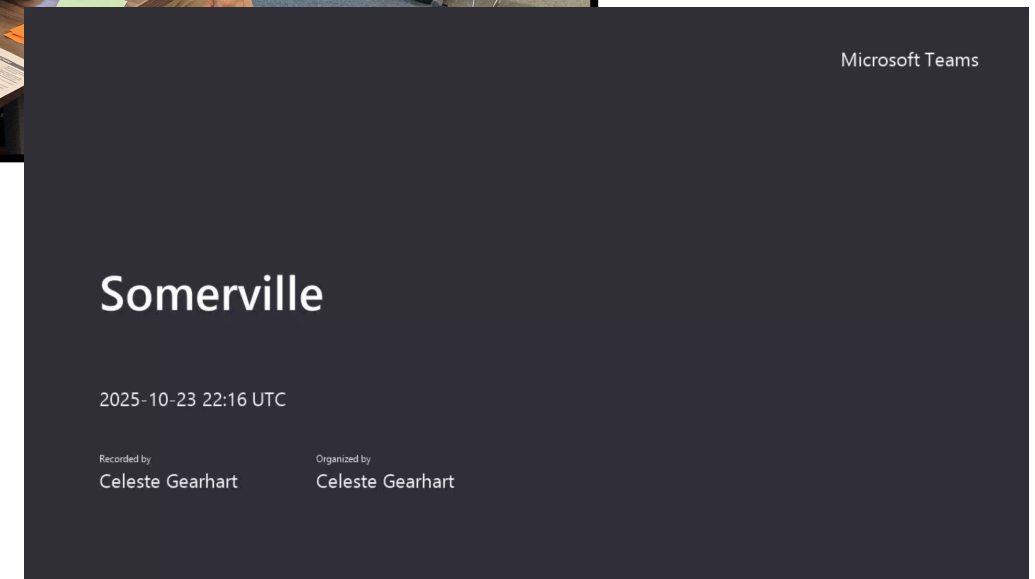
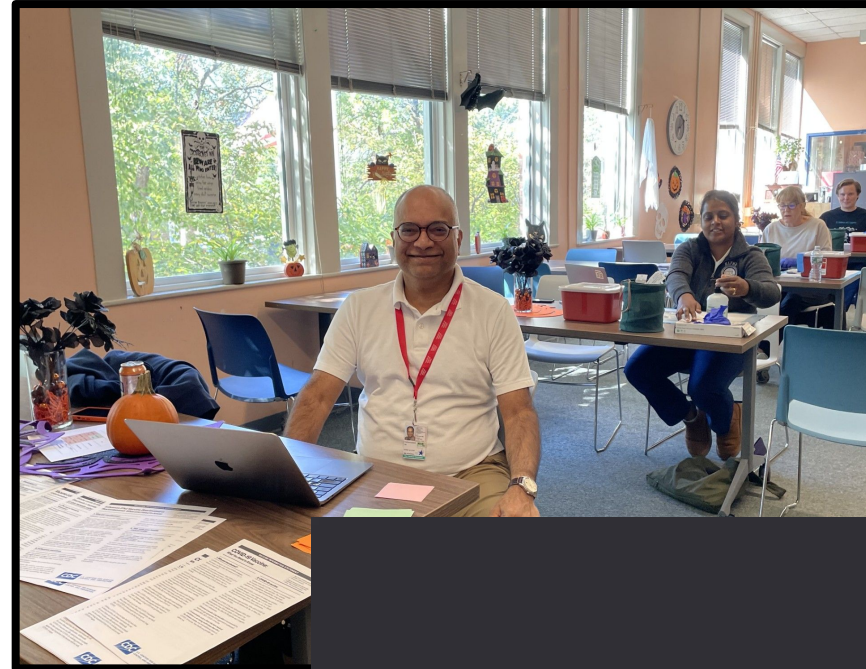
- **Community Health Worker**

- Foodborne Illness Cases
- Tuberculosis (TB) Directly Observed Therapy (DOT)
- TB B1 Arrivals
- Social Determinants of Health (SDOH) Screenings and Referrals



Somerville's Team and Vaccination Efforts

- **Public Health Nurses**
 - Coordinate Clinic Logistics
 - Vaccinators
- **Community Health Workers**
 - Address cultural/language barriers
 - Vaccine Confidence Ambassadors
- **Metro East MRC Volunteers**
 - Registration Support
 - Vaccination Support
- **Epidemiologist**
 - Interprets Data for Strategic Planning



Community Impact - Measurable Outcomes

- **Quantitative Results**
 - Performance Measures
 - Data completion
 - Fewer “Lost-to-follow-up” Interviews
- **Qualitative Results**
 - Improved community trust
 - Enhanced cultural competency
 - Better health equity outcomes

Overcoming Challenges

- **Common Obstacles**
 - Communication barriers between disciplines
 - Resource Limitations
 - Scheduling Coordination
 - Role Clarity Issues

What are your experiences?

Best Practices for Interdisciplinary Success

- **Communication Strategies**
 - Regular Meetings and Debriefings
 - Shared Documentation Systems
 - Clear Escalation Protocols
- **Team Development**
 - Cross Training Opportunities
 - Continuous Quality Improvement

Tools for an Interdisciplinary Team Approach

- **Quarterly Staff Meetings/Chalk Talks**

- Discuss current case investigations, casework tips, disease trends, challenges, upcoming coverage plans, etc.
 - Holidays, retirements, vacations, vaccine clinics, disease seasons, etc. can be (fairly) predictable if you are planning ahead.

- **Team Assignments/Regional Staff Incorporation**

- Incorporate shared services staff (regional/local Epis and PHNs) into your MAVEN work.

- **Staffing Strategies Can Include:**

- Utilizing MAVEN's Tasking and Assignment features; designating teams by disease (to promote proficiency through repetition); utilizing case review by supervisors, etc.



Ensuring Coverage

- **Who in your jurisdiction(s) provides MAVEN coverage?**
 - Do you have trained and active surge or backup coverage?
- **Do your MAVEN staff (PHNs, Epis, Health Agents) know the details of your Shared Services Arrangements and who they could tap into for coverage assistance and planning?**
- **Summer Planning/Increases in Caseloads/Outbreak Preparedness/Staff Illness/Fall Vaccine Clinics, etc.**
 - Develop partnerships and systems now before the emergency.



Key Takeaways

- Interdisciplinary clinical teams enhance disease investigation effectiveness.
- Each discipline brings value.
- Collaboration improves community health outcomes.
- Investment in team development yields significant returns.
- Partnership, delegation, and oversight processes can vary widely across jurisdictions, but the goal is to support comprehensive public health programming and to ensure our PHNs are supported and able to work to the top of their licenses.

Final thoughts from a Regional Epidemiologist...

“If there was one thing I could convey to Directors and PHNs, it is that Epis (especially those working in local public health) have a wide variety of skills beyond just data analysis and we want to partner alongside you to add to the work that you do. Many of us are drawn to local public health because we believe in community and want to connect with people.

We may ask a lot of questions or focus on details that may not seem important, but we ask with intention to better understand, inform, and ultimately effectively communicate health information to our communities. At the end of the day our goal is the same as yours, we want to ensure safe, healthy communities for all residents.”

- Regional (Shared Services) Epidemiologist

Audience Experiences with Interdisciplinary Teams

Professional Organizations: Public Health Nursing

Massachusetts Association of Public Health Nurses

- The Massachusetts Association of Public Health Nurses seeks to strengthen the leadership role of the public health nurses within the Commonwealth of Massachusetts. As the official state organization for public health nurses, the association:
 - Provides a common voice on issues of public health nursing
 - Advocates for Public Health Nursing
 - Enhances the health of Massachusetts residents

<https://maphn.org/>



Professional Organizations: Epidemiology

Council of State and Territorial Epidemiologists (CSTE)

- Professional organization of member states and territories representing public health epidemiologists.
 - CSTE works to advance public health policy and epidemiologic capacity. CSTE provides information, education, and developmental support of practicing epidemiologists in a wide range of areas as well as expertise for program and surveillance efforts.
 - CSTE recently launched the **Generalist Local Epidemiologist Workgroup** which aims to convene local epidemiologists to discuss ongoing work, challenges and successes. (Open to all members) [Sign Up](#). Send questions to Sarah at sauer@cste.org. Next mtg 12/9/25 2pm ET.

<https://www.cste.org/>

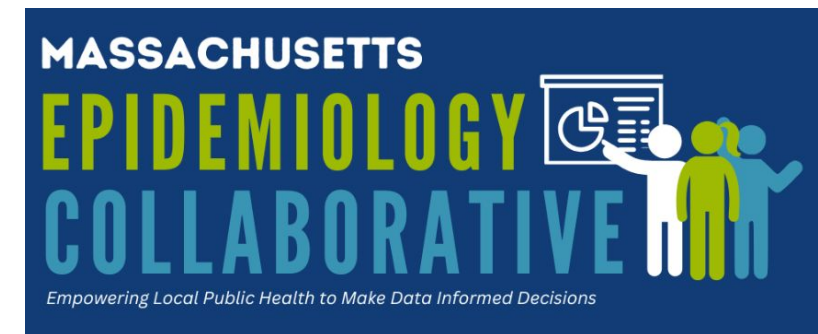


Professional Organizations: Epidemiology

Massachusetts Regional Epidemiology Collaborative

- Work group for Massachusetts local and regional epidemiologists.
 - Collaborates to strengthen local public health in MA using data. Participants meet weekly via Zoom to share work, discuss challenges, and troubleshoot solutions, often partnering with MDPH Epis and local organizations who collect or utilize local level data to make decisions.

MA Regional Epidemiology Collaborative
maregionalepi@gmail.com



Professional Organizations: Community Health Workers

MA Association of Community Health Workers (MACHW):

- The core work of MACHW is to:
 - Offer training and assistance to address emerging public health issues and promote core competencies, leadership, and certification;
 - Create regional spaces where CHWs can network, identify resources for ensuring effective care, and address barriers to maximizing their scope of practice;
 - Collaborate with higher education partners to create pathways for CHWs to enroll in and complete academic degrees at undergraduate and graduate levels;
 - Educate employers about best practices and provide technical assistance in onboarding, supervising, funding, and evaluating CHW programs; and
 - Develop and advocate for policies that secure the professional role and standardization of CHWs.

<https://machw.org/>

MA Association of
Community Health Workers

Thank You

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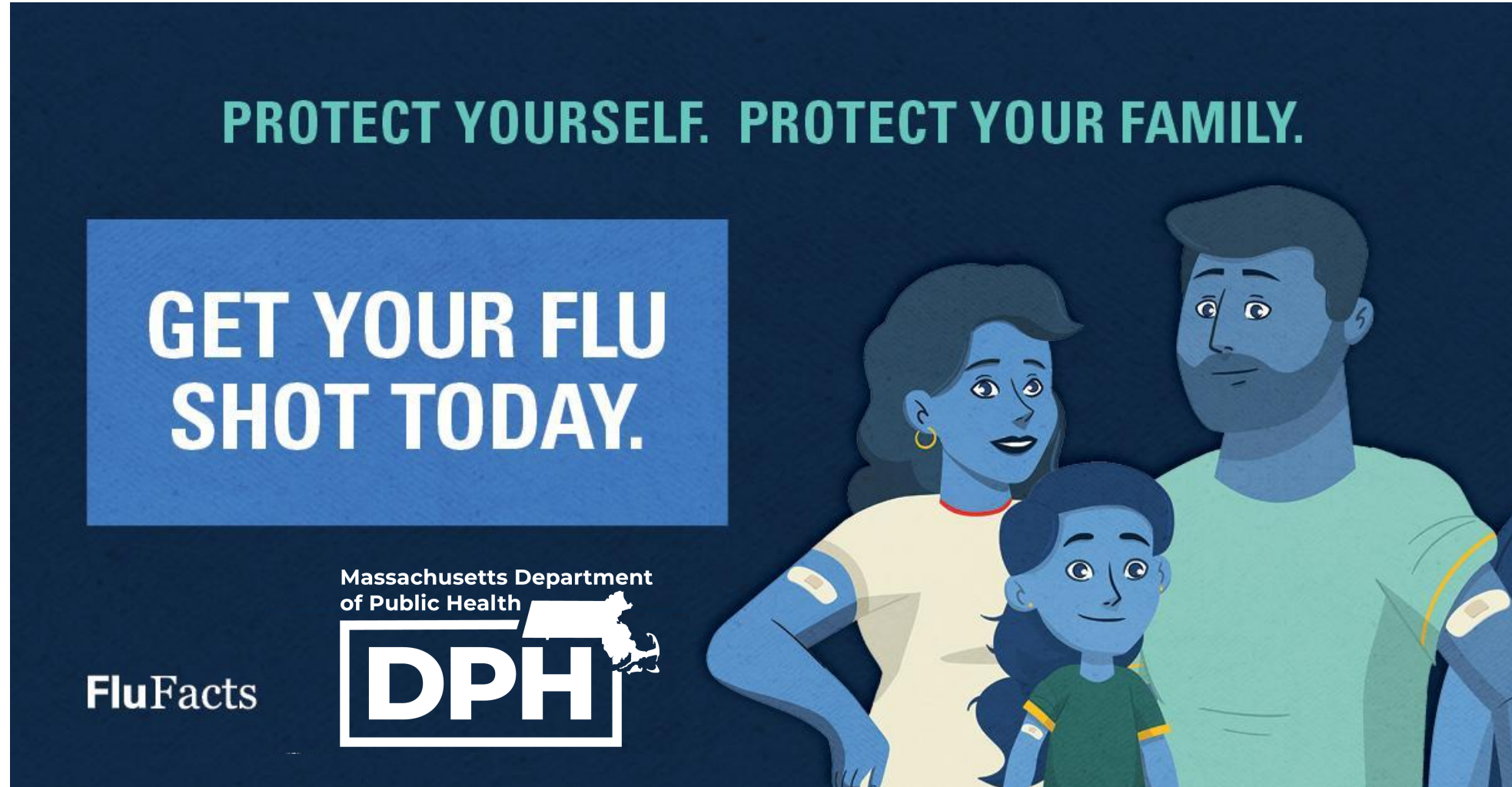
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