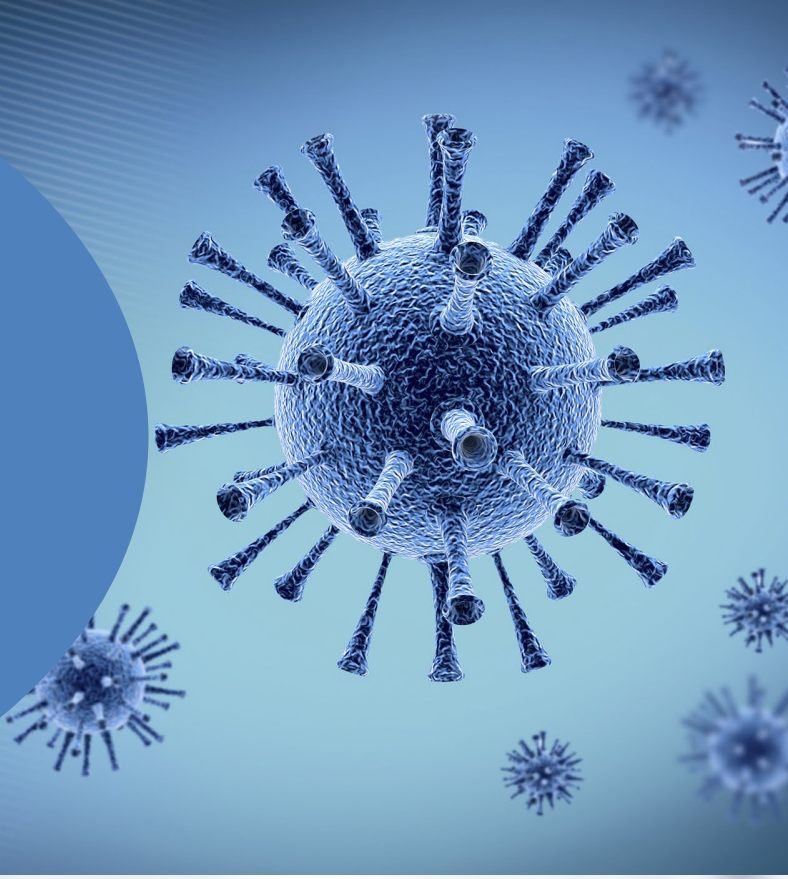
SCHOOL NURSE UPDATES ON PEDIATRIC INFECTIOUS DISEASES AND IMMUNIZATIONS



All Regions School Nurse Meeting
October 16, 2024
1:00 PM - 3:00 PM

MASSACHUSETTS SCHOOL NURSE CONSULTATION PROGRAM

MASSACHUSETTS SCHOOL NURSE CONSULTATION PROGRAM

CHANGE A LIFE
BE A SCHOOL NURSE
CHANGE A LIFE

The Massachusetts School Nurse Consultation Program

The Massachusetts School Nurse Consultation Program provides educational and networking programs for all school nurses to keep you up to date on important school health related requirements and resources. Your consultant is available to all school nurses and health staff.

Massachusetts School Nurse Regional Consultants

Meg Burch, MS, RN, NCSN	Western Regional Consultant, Berkshire/Franklin
Ann Linehan, DNP, MSN, RN	Southeast Regional Consultant
Janet Guertin-Moruzzi, MEd, BSN, RN, NCSN	Public Health Nurse Advisor, Non-Public Schools
Mary Jane O'Brien PhD, RN, CPNP-PC, NCSN	Boston Regional Consultant
Tracy Rowe, MEd, BSN, RN, NCSN	Central Regional Consultant
Tricia Smith, BSN, RN, NCSN	MetroWest Regional Consultant
Shanyn Toulouse, DNP, MEd, RN, NCSN	Northeast Regional Consultant
Veronica Webb Barrett, MSN, MA Ed Psych, RN, HNB-BC	Western Regional Consultant, Hampshire/Hampden

MASSACHUSETTS SCHOOL NURSE CONSULTATION PROGRAM

Agenda

1:00 - 1:10	Welcome MDPH School Health Services Updates	Karen Robitaille, MBA, MSN, RN, NCSN MDPH Director of School Health Services
1:10 - 1:35	Update of Current Respiratory Viruses, EEE & WNV	Catherine Brown, DVM, MSc, MPH, State Epidemiologist MDPH Bureau of Infectious Disease and Laboratory Sciences
1:35 - 2:00	Mitigating Transmission and Preventing Infectious Disease in School Aged Children and Support of Newcomers	Safdar Medina, MD, FAAP Pediatrician, School Physician, Physician Consultant to MDPH School Health Services
2:00 - 2:25	Tuberculosis and School Aged Children	Anna Hippchen, DNP, MDPH TB Lead Public Health Nursing Advisor
2:25 - 2:50	School Immunization Survey and Data	Christopher Tocci, MPH, MDPH Immunization Epidemiologist
2:50 - 3:00	Office of Local and Regional Health Public Health Excellence Grant	Caitlin Pettengill, DNP, RN, Chief Local Public Health Nurse MDPH Office of Local and Regional Health Kristin Black, PhD, MS, Director of Shared Services MDPH Office of Local and Regional Health

MASSACHUSETTS SCHOOL NURSE CONSULTATION PROGRAM

Objectives

- Discuss current epidemiology of pediatric COVID-19, influenza, pertussis, and RSV
- Identify 105 CMR 300 Strep A pharyngitis return to school guidance (vs. AAP)
- Discuss the health of newcomers to Massachusetts and the role of schools
- Describe MA Pediatric TB Risk Assessment
- Describe types of tests of TB infection
- Provide an overview of the purpose of the School Immunization Survey.
- Highlight 23 - 24 MA school-aged vaccination data trends and statistics

MASSACHUSETTS SCHOOL NURSE CONSULTATION PROGRAM

Welcome!

Karen Robitaille, MBA, MSN, RN, NCSN

MDPH Director of School Health Services

MASSACHUSETTS SCHOOL NURSE CONSULTATION PROGRAM

Massachusetts Department of Public Health

Disease Trends in Children: Respiratory Viruses and WNV/EEE

October 16, 2024

Catherine M. Brown, DVM, MSc, MPH
Bureau of Infectious Disease and Laboratory Sciences

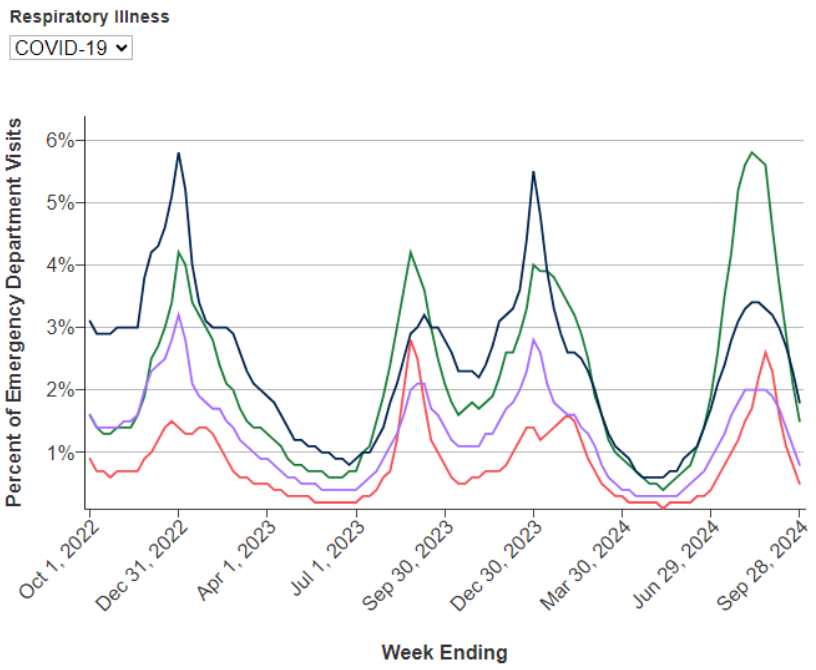
Objectives

- Discuss current epidemiology of COVID-19, influenza and RSV in children
- Discuss current epidemiology of pertussis
- Provide a brief update on enterovirus D68
- Provide a brief update on mosquito-borne diseases

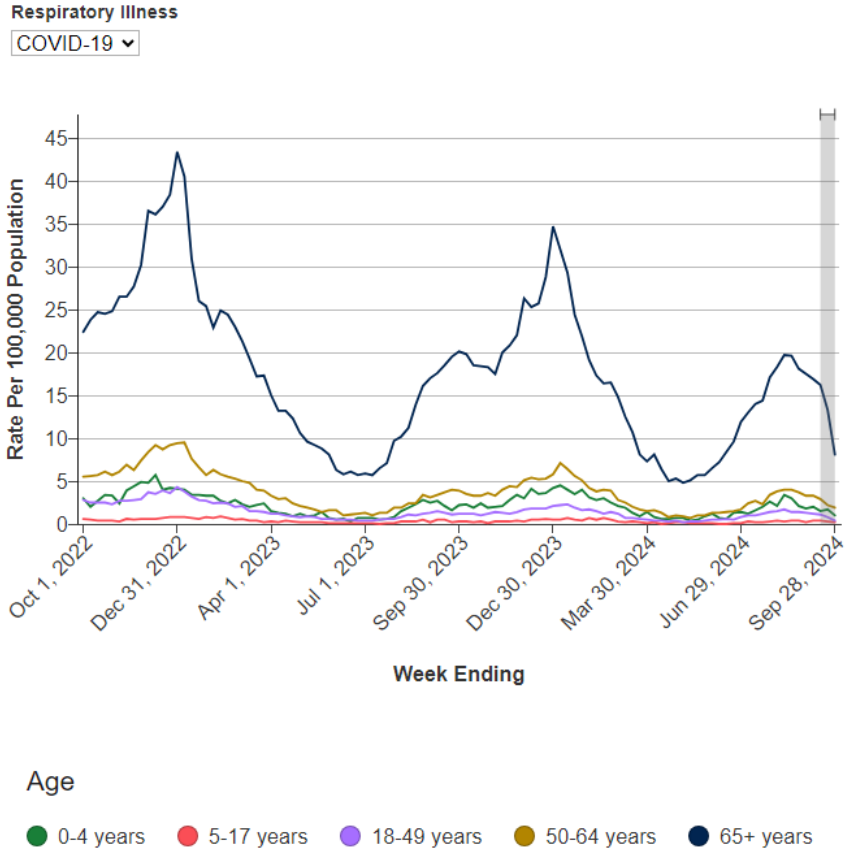
I have no conflicts of interest to report.

COVID-19, Flu and RSV

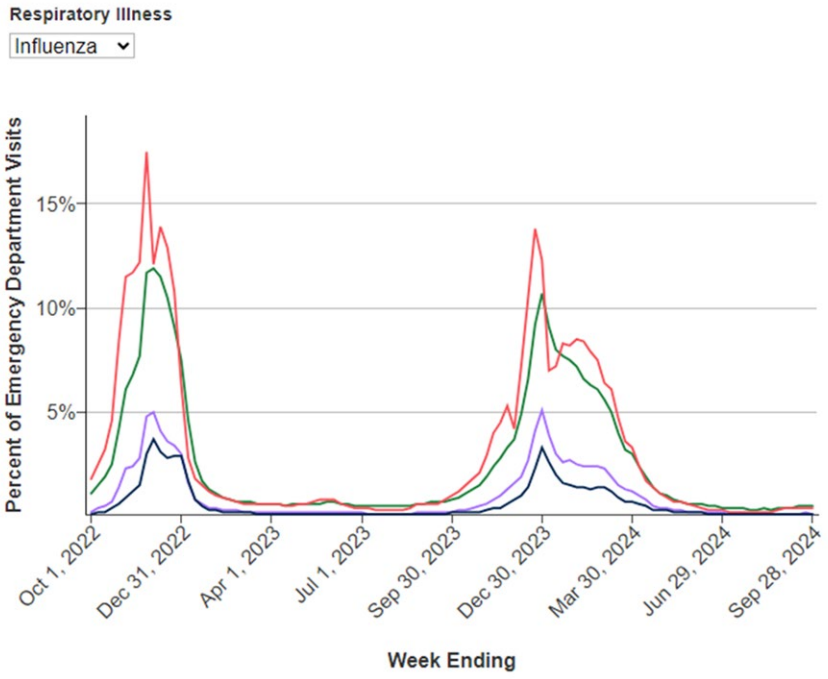
Emergency Department Visits



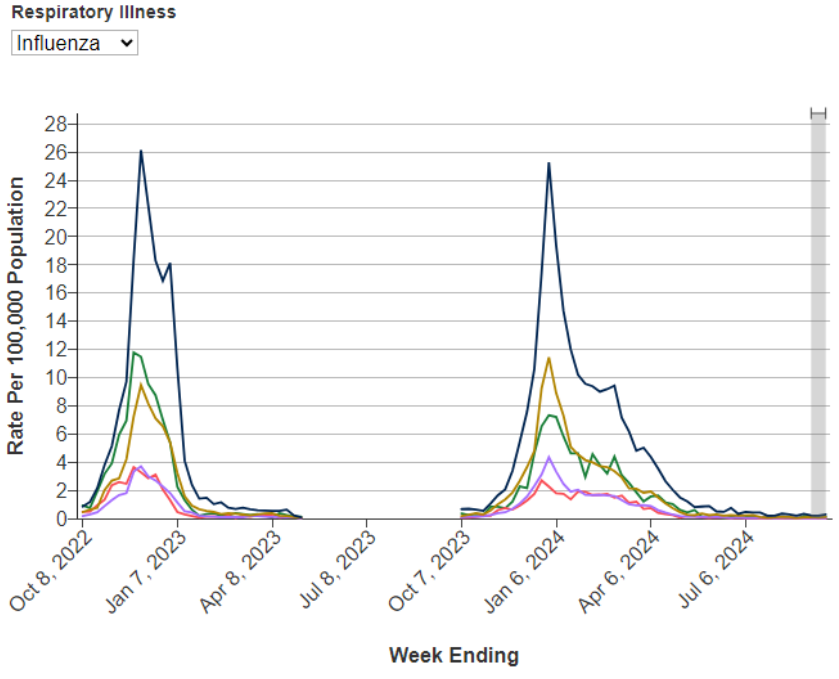
Hospitalizations



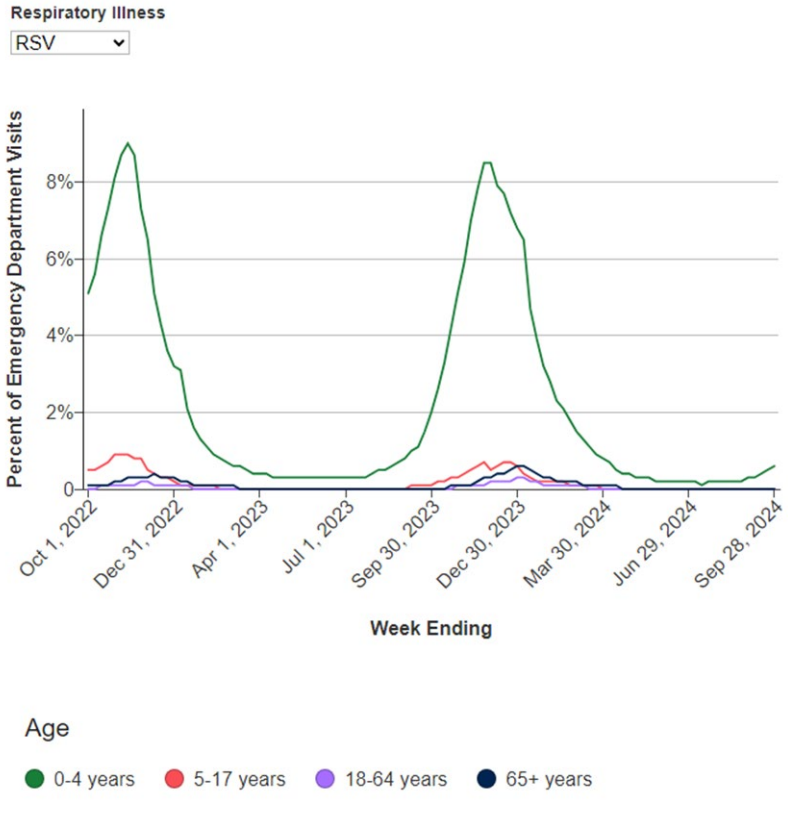
Emergency Department Visits



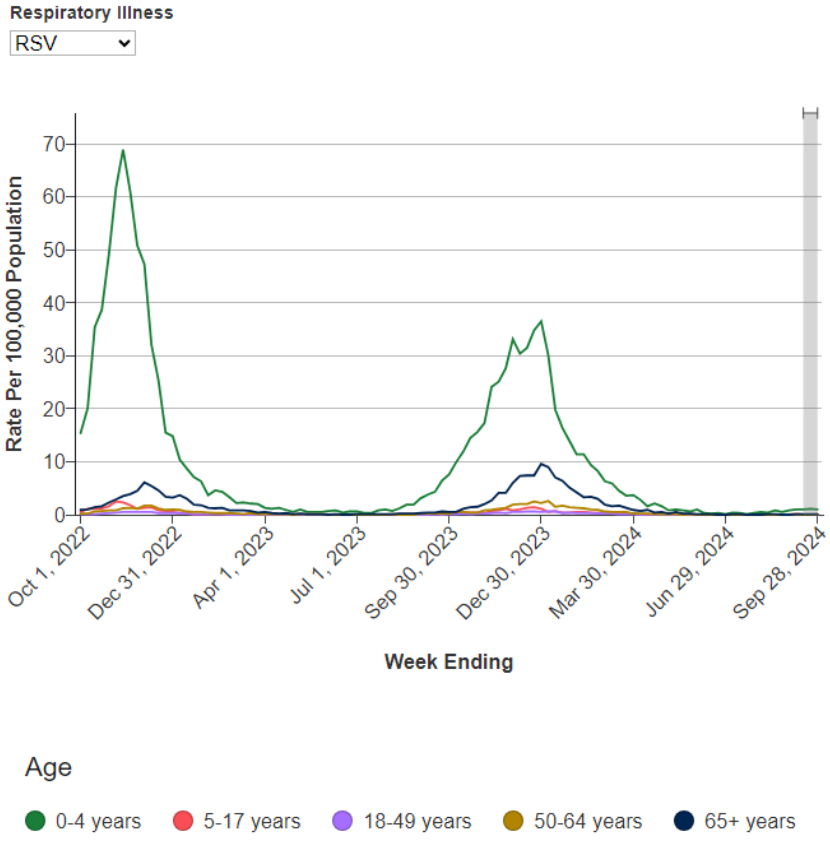
Hospitalizations



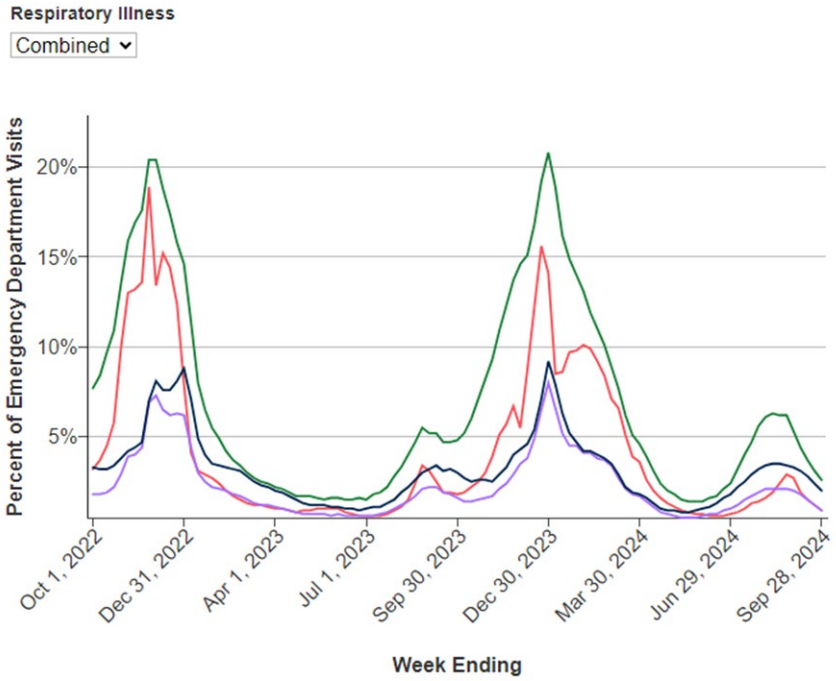
Emergency Department Visits



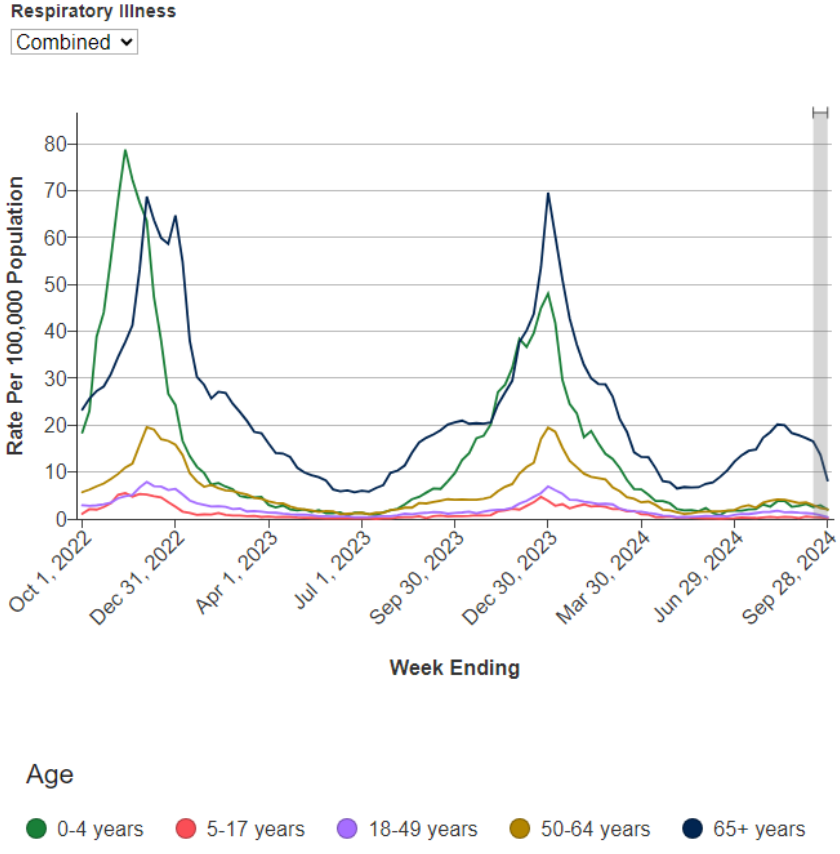
Hospitalizations



Emergency Department Visits



Hospitalizations



New Grim Milestone for Flu Pediatric Deaths Set

WHAT TO KNOW

Update on pediatric flu deaths in the U.S and emphasis on getting the flu vaccine.

Pediatric Flu Deaths Reach 200 for the 2023-24 Flu Season

September 27, 2024 – CDC reported one new flu-related death in a child last week, bringing the total number of U.S. pediatric deaths for the 2023-2024 season to 200. This number of pediatric deaths exceeds the previous high reported for a regular (non-pandemic) flu season. The previous high of 199 deaths was reported during the 2019-2020 season. Consistent with other seasons, of children who were eligible for a flu vaccine and for whom vaccination status was known, about 80 percent were not fully vaccinated.

Getting your child a flu vaccine is the most effective step to reduce the risk of flu illness and flu-related doctor's visits and missed school days; flu vaccination also reduces the risk of flu-related hospitalization and death. In the 2023-2024 season, estimates indicated that flu vaccination reduced the risk of flu related medical visits by approximately two-thirds and halved the risk of flu-related hospitalization for vaccinated children. September and October are the best times for most children to receive flu vaccine. CDC recommends everyone 6 months and older get an annual flu vaccine, especially children at higher risk for serious flu complications.

RELATED PAGES

What's New

2024 Annual News Conference: Preventing Respiratory Disease This...

Flu Deaths in Children Last Season Reach 199, Matching Record

CDC Study Shows Early Flu Antiviral Treatment Decreases Risk of Death

Southern Hemisphere Flu Season Could Provide Clues on Upcoming U...

CDC Reports Two Human Infections with Variant Influenza Viruses

VIEW ALL
Influenza (Flu)

BACK TO TOP

Massachusetts Department of Public Health | Respiratory Immunizations Dashboard

Overview of Immunization Progress this Season

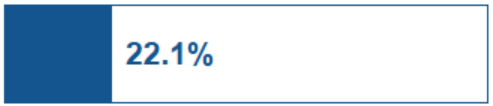
Last updated on July 3, 2024
with data through June 29, 2024

Vaccination data for this season are unavailable at this time as the 2024-2025 vaccines are still awaiting release nationwide. Once they become available, we will begin collecting and reporting data. Check back here in the early fall when we expect to have more information. Until then, previous season's data are available here.

Vaccinated against COVID-19

22.1%

Approximately 1 out of every 5 Massachusetts residents have been vaccinated against COVID-19 this season.



Vaccinated against influenza

41.7%

Approximately 2 out of every 5 Massachusetts residents have been vaccinated against influenza this season.

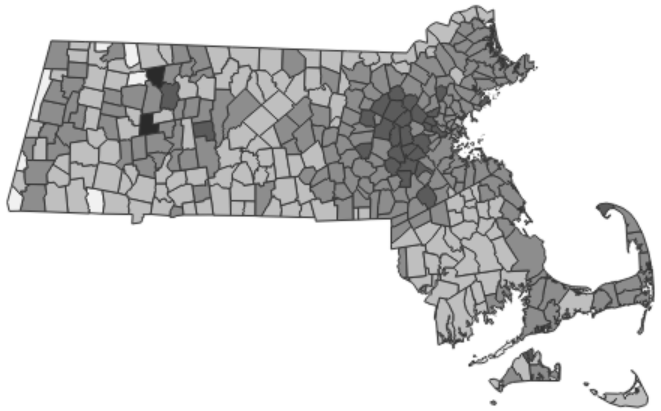
Immunized against RSV

339,401

Approximately, 339,401 Massachusetts residents have received an RSV vaccination or monoclonal antibody treatment for RSV. For more on RSV immunizations, click on the RSV button in the menu above.

Select a vaccine and hover over a town to see the percent vaccinated.
Influenza

Town residents vaccinated against influenza



For more town data, click on the Data by Town button in the menu above.

Source: Massachusetts Immunization Information System (MIIS), also called an immunization registry, is a confidential, web-based system that collects and stores vaccination records for any vaccine administered in Massachusetts. The data in MIIS are updated frequently, but may not include all vaccination records for Massachusetts residents, such as those who were vaccinated out of state. Data are preliminary and subject to change. For more information on MIIS, visit mass.gov/miis. MIIS is maintained and analyzed by the Immunization Division. Population data source: UMass Donahue Institute. Created by the Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, Division of Surveillance, Analytics and Informatics.

Massachusetts Department of Public Health | Respiratory Immunizations Dashboard
Compare Progress this Season

Last updated on July 3, 2024
with data through June 29, 2024

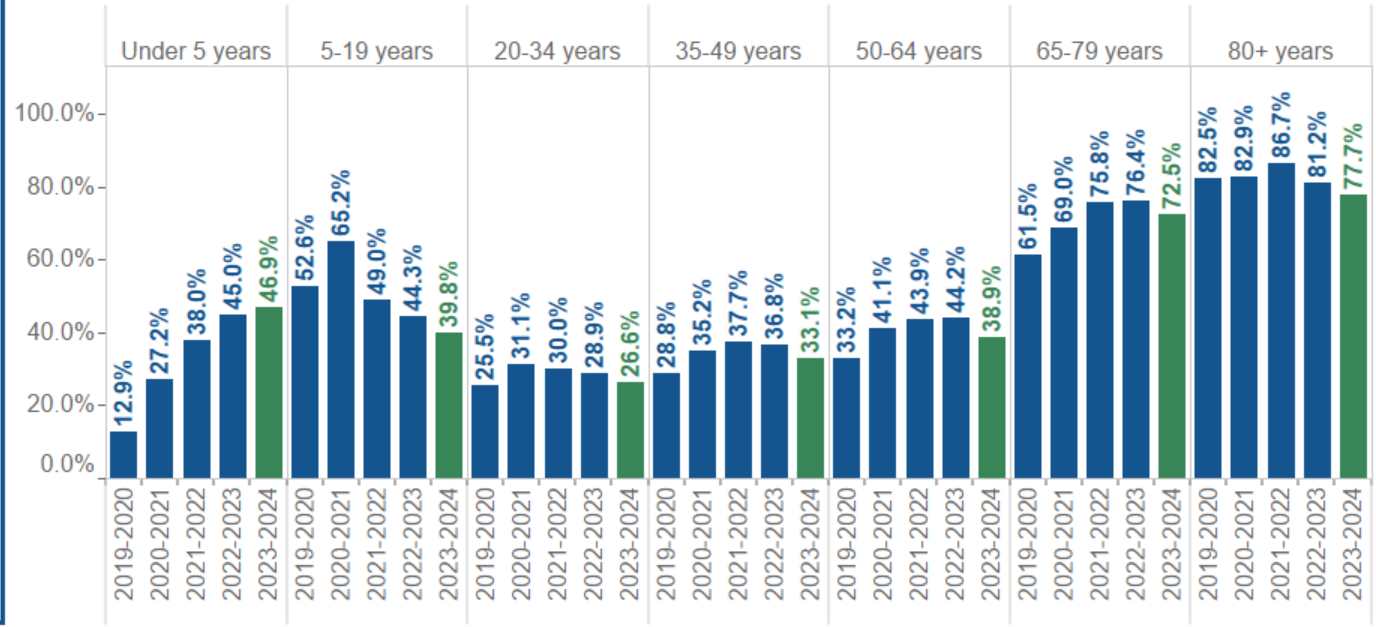
Select a vaccine
Influenza

Select a group
Age

Add seasons for comparison
- [x] Current season
- [x] Previous seasons

Graph legend
- Current season
- Previous seasons

Comparing the estimated percent of Massachusetts residents who **have been vaccinated for influenza this season** by age* **to the percent vaccinated during previous seasons**



*For statewide analyses, proportions are not presented for groups without population denominators (e.g., other, unknown, etc.). Cells with small numbers have been suppressed. For the statewide reports, numbers < 30 are suppressed. Some cells are suppressed secondarily to prevent back-calculation. Source: Massachusetts Immunization Information System (MIIS), also called an immunization registry, is a confidential, web-based system that collects and stores vaccination records for any vaccine administered in Massachusetts. The data in MIIS are updated frequently, but may not include all vaccination records for Massachusetts residents, such as those who were vaccinated out of state. For more information on MIIS, visit mass.gov/miis. MIIS is maintained and analyzed by the Immunization Division. Population data source: UMass Donahue Institute. Created by the Massachusetts Department of Public Health, Bureau of Infectious Disease and Laboratory Sciences, Division of Surveillance, Analytics and Informatics.

Massachusetts Department of Public Health | Respiratory Immunizations Dashboard
Compare Progress this Season

Last updated on July 3, 2024
with data through June 29, 2024

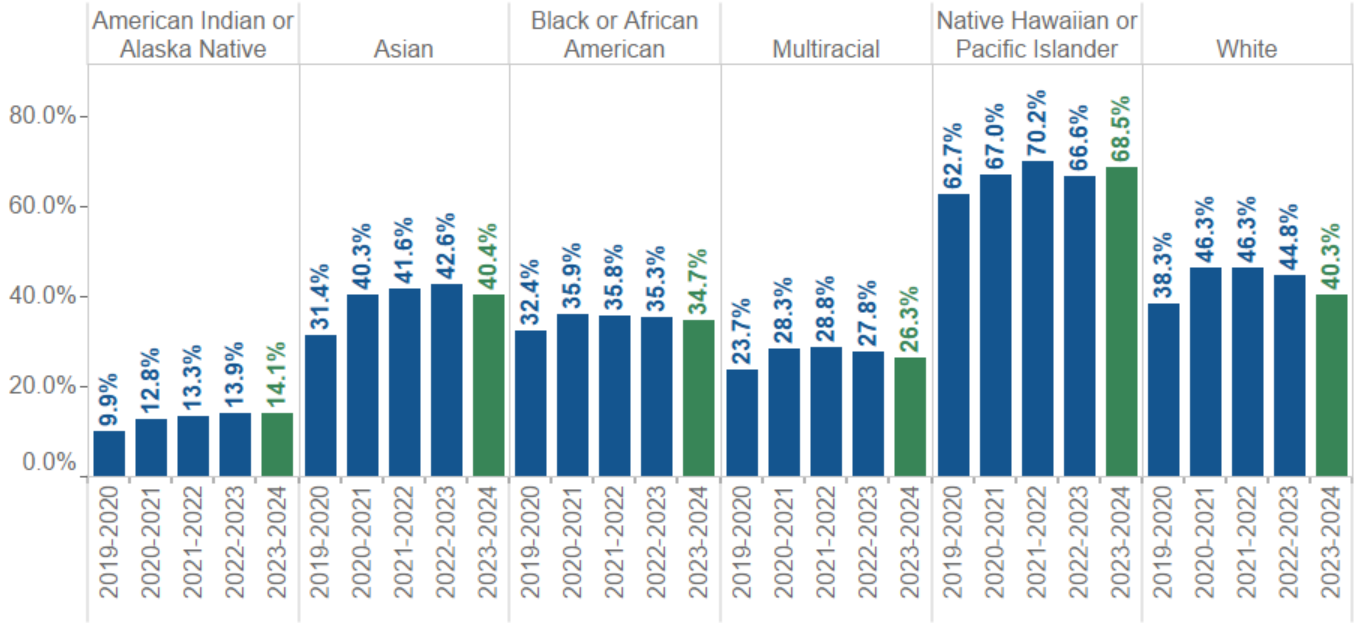
Select a vaccine
Influenza

Select a group
Race

Add seasons for comparison
- [x] Current season
- [x] Previous seasons

Graph legend
- Current season
- Previous seasons

Comparing the estimated percent of Massachusetts residents who **have been vaccinated for influenza this season** by race* **to the percent vaccinated during previous seasons**



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Massachusetts Department of Public Health | Respiratory Immunizations Dashboard
Compare Progress this Season

Last updated on July 3, 2024
with data through June 29, 2024

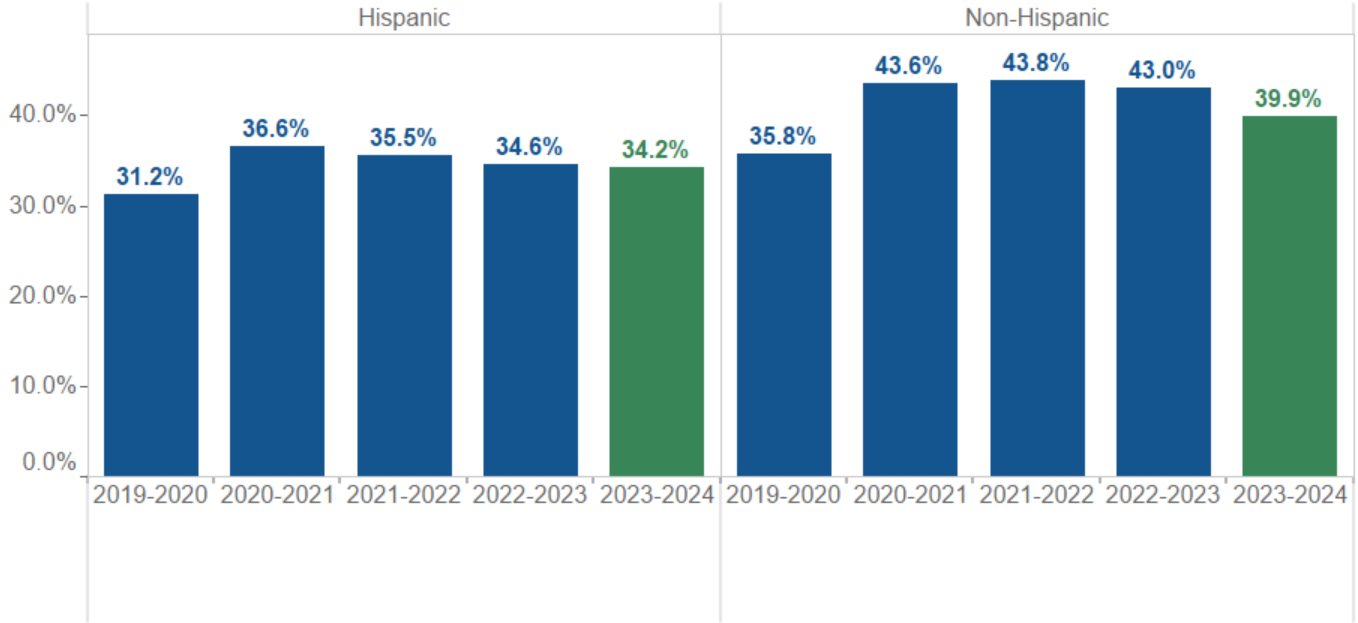
Select a vaccine
Influenza

Select a group
Hispanic ethnicity

Add seasons for comparison
- [x] Current season
- [x] Previous seasons

Graph legend
- Current season
- Previous seasons

Comparing the estimated percent of Massachusetts residents who **have been vaccinated for influenza this season** by Hispanic ethnicity* **to the percent vaccinated during previous seasons**



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Massachusetts Department of Public Health | Respiratory Immunizations Dashboard
Compare Progress this Season

Last updated on July 3, 2024
with data through June 29, 2024

Select a vaccine
COVID-19

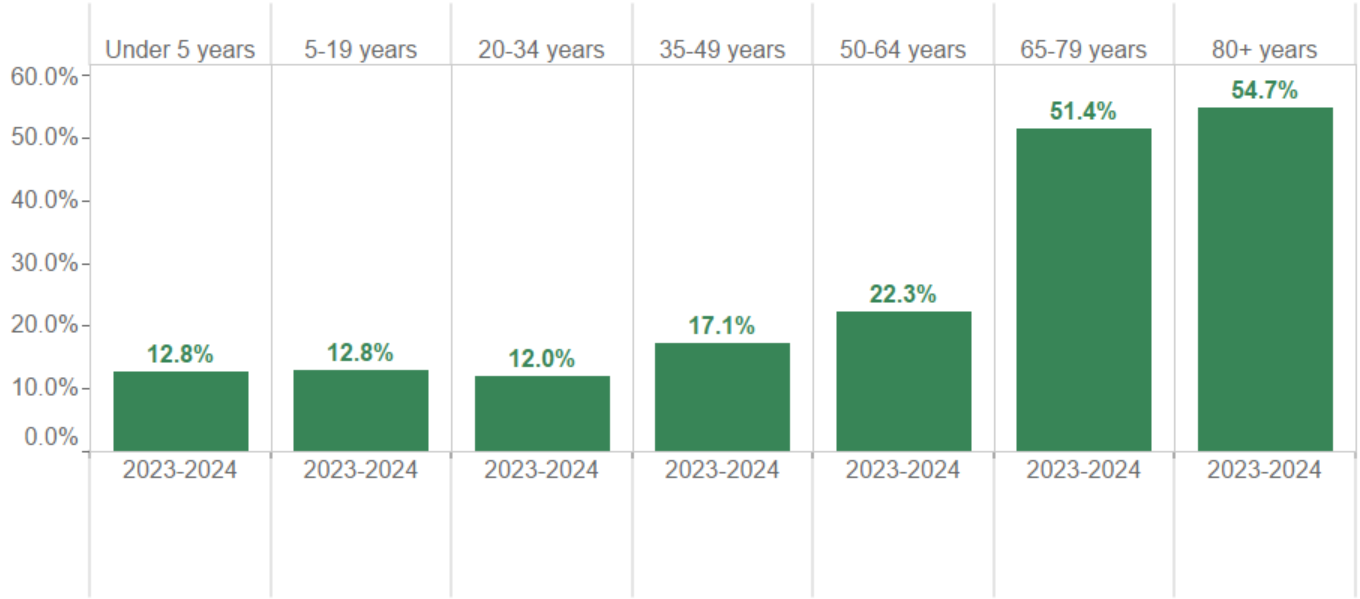
Select a group
Age

Add seasons for comparison
- [x] Current season
- [x] Previous seasons

Graph legend
- Current season

Comparing the estimated percent of Massachusetts residents who **have been vaccinated for COVID-19 this season** by age*

Previous season's comparison data are not available for COVID-19



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Massachusetts Department of Public Health | Respiratory Immunizations Dashboard
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Select a vaccine
COVID-19

Select a group
Race

Add seasons for comparison
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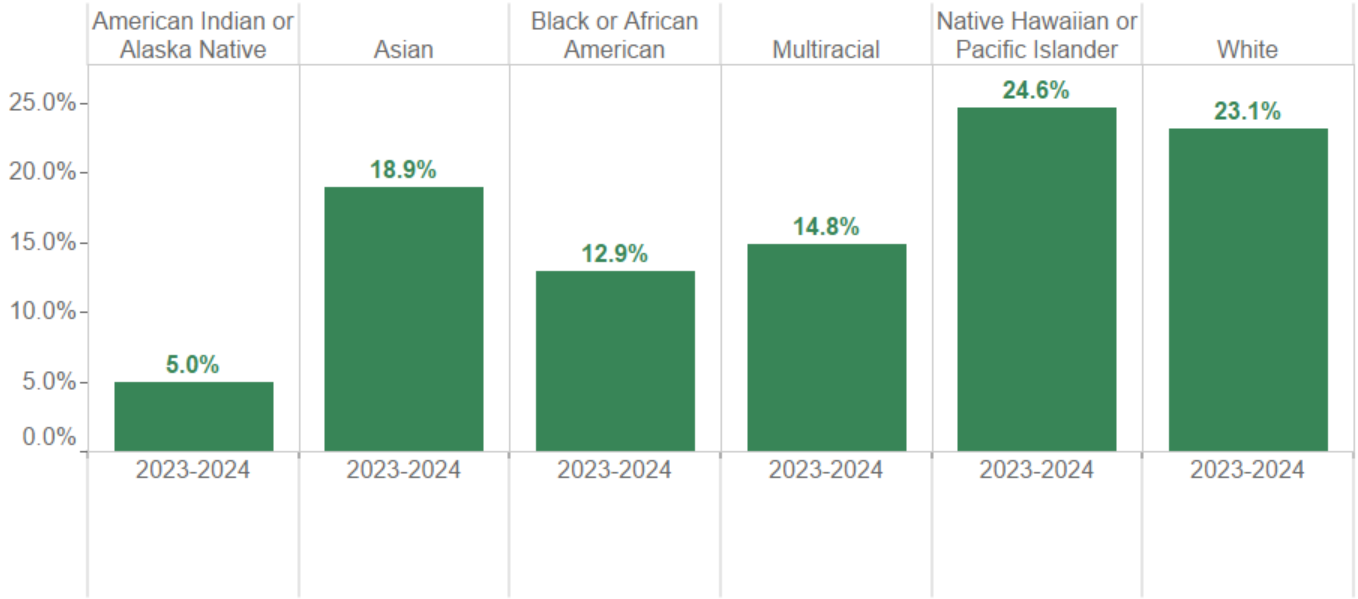
Graph legend
- Current season

Comparing the estimated percent of Massachusetts residents who **have been vaccinated for COVID-19 this season** by race*

Previous season's comparison data are not available for COVID-19



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Massachusetts Department of Public Health | Respiratory Immunizations Dashboard
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Last updated on July 3, 2024
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Select a vaccine
COVID-19

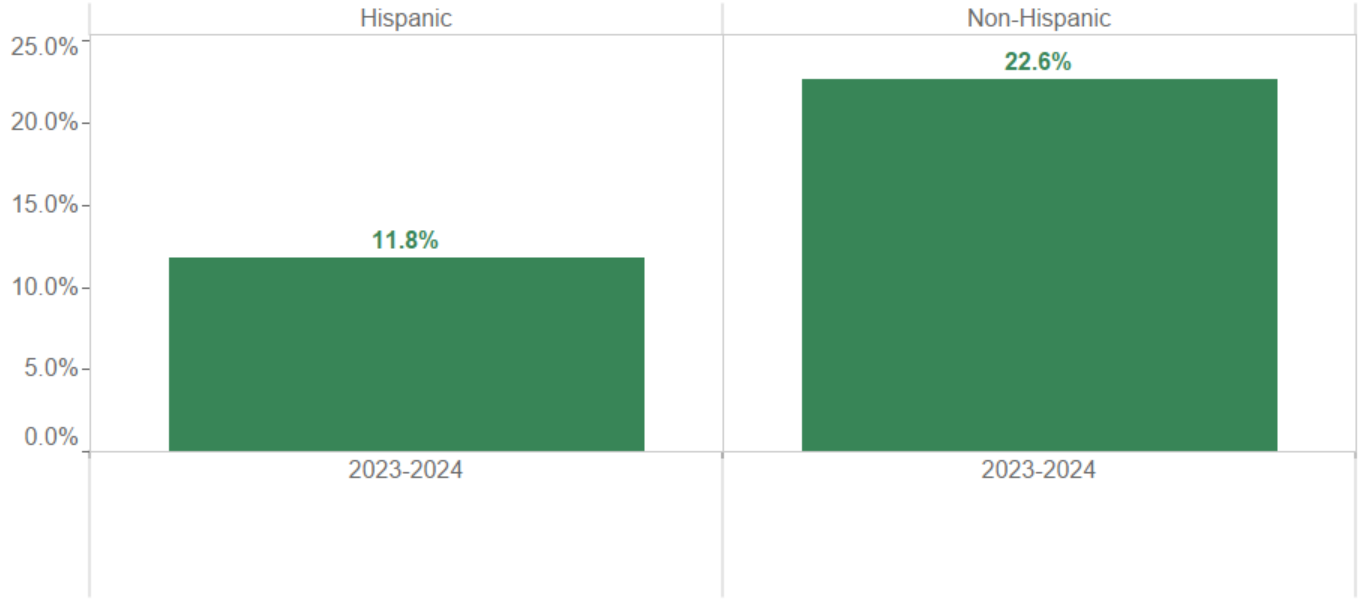
Select a group
Hispanic ethnicity

Add seasons for comparison
- [x] Current season
- [x] Previous seasons

Graph legend
- Current season

Comparing the estimated percent of Massachusetts residents who **have been vaccinated for COVID-19 this season** by Hispanic ethnicity*

Previous season's comparison data are not available for COVID-19



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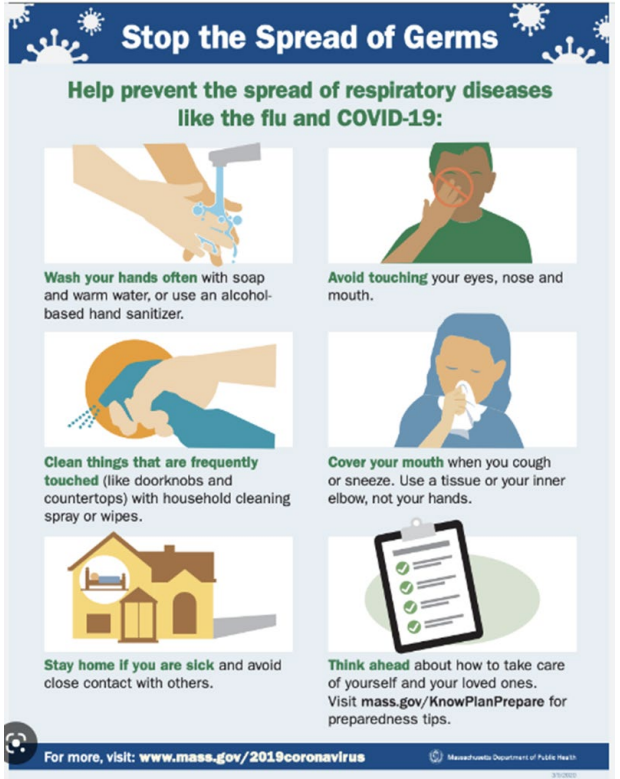
General Prevention Measures

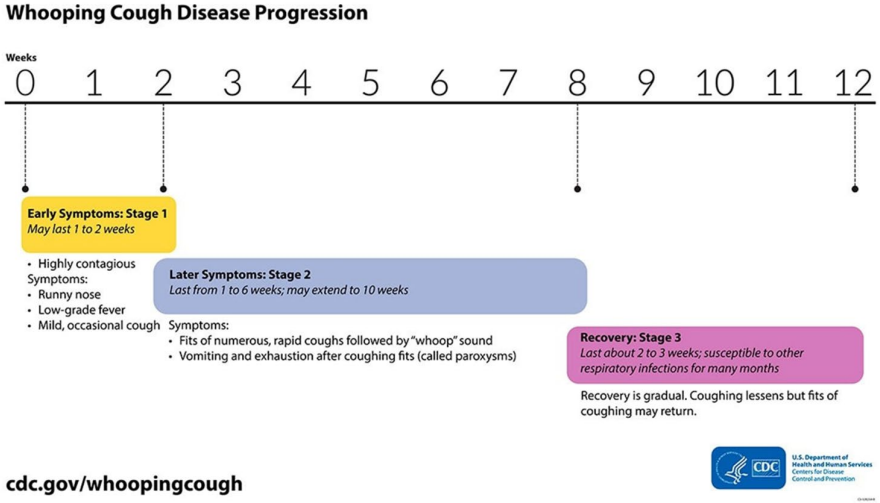
- Stay home when sick
- Hand hygiene
- Cover your cough
- Stay home when sick
- Avoid others who are sick
- Clean high-touch surfaces
- Increase ventilation
- Masks optional but effective
- Stay home when sick



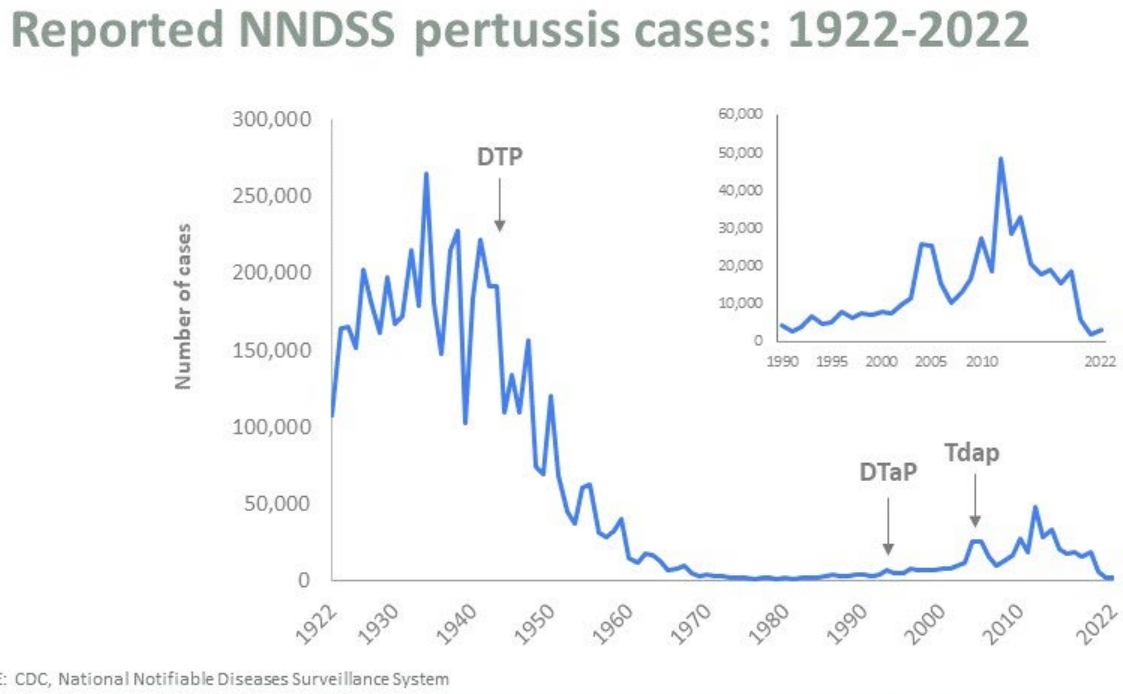
Whooping Cough

Whooping Cough (Pertussis)

- Infection caused by *Bordetella pertussis*
- Risk Factors
  - Babies <1 year
  - People who are immunocompromised or with moderate to severe asthma
- People can be infectious for weeks
  - Including those with no or mild symptoms
- Prevention
  - Vaccination
  - Postexposure prophylaxis



Effect of Vaccination

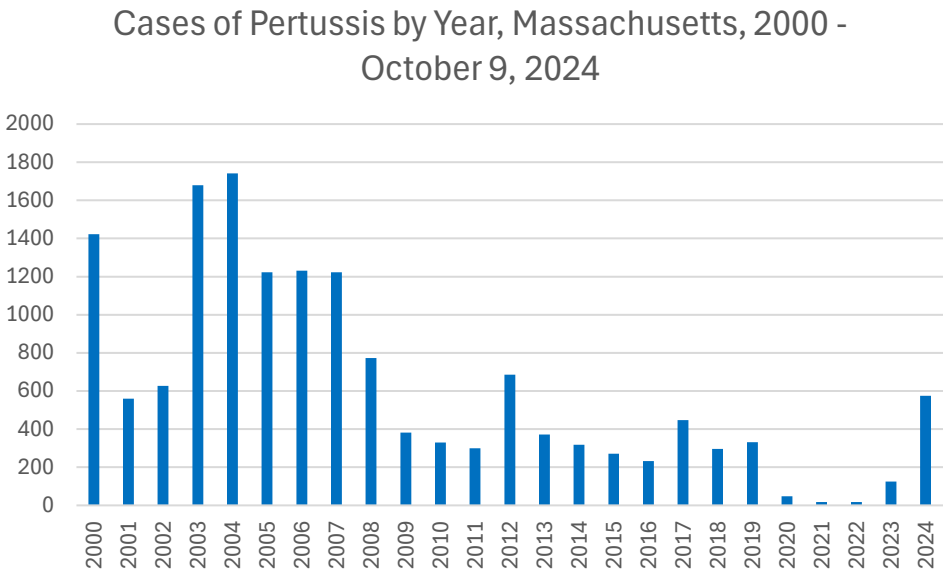


DTP = original, whole cell vaccine

DTaP = current acellular vaccine for infants and young children

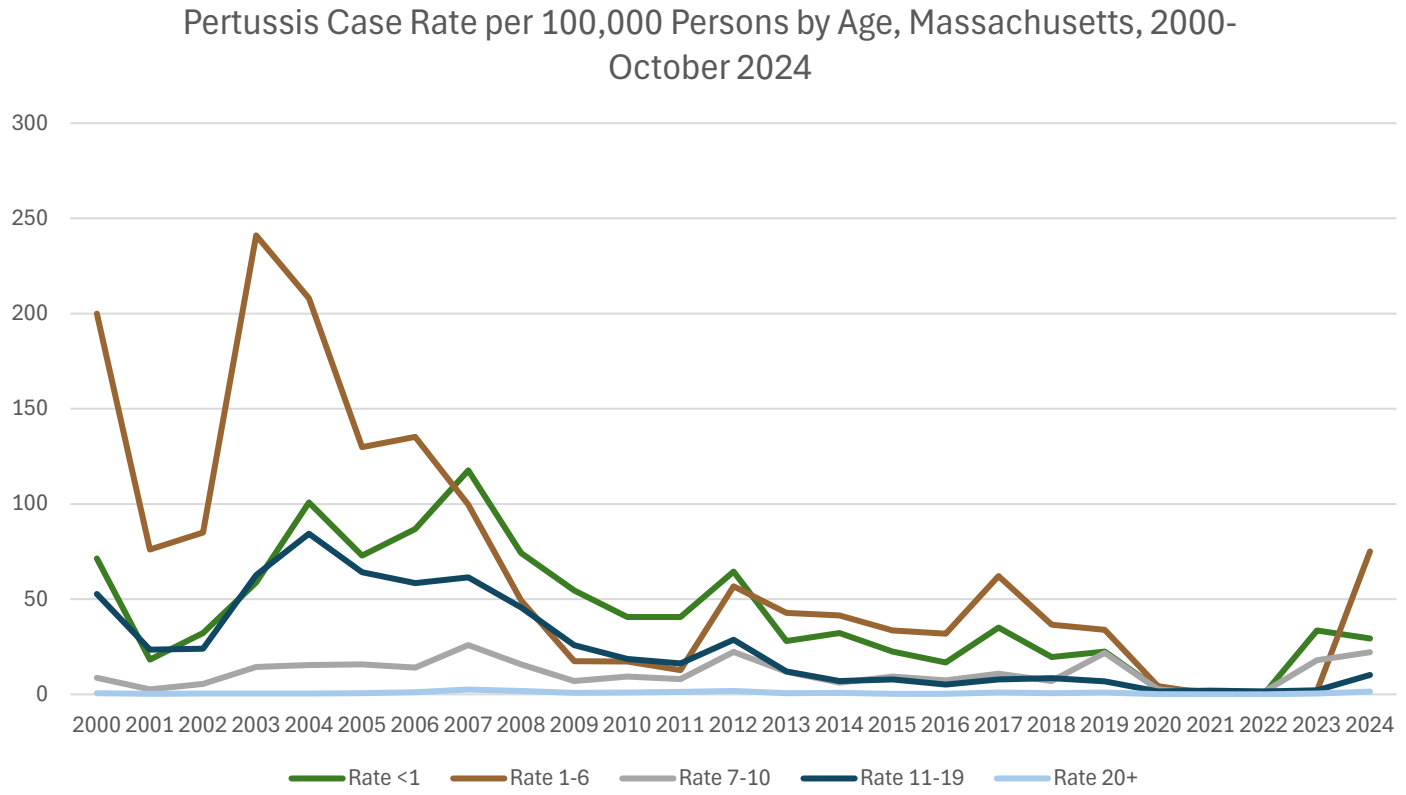
Tdap = current acellular vaccine for older children and adults

Pertussis in 2024



- Increases occurring nationally
- 5x more cases than at the same time last year (by 9/28/2024)
- Increases seen in other countries as well

Case Rates by Age



Pertussis Outbreaks

- Common outbreak settings
  - Schools and childcare centers
  - Hospitals
- Can be complicated to manage
  - Undiagnosed cases
  - Other similar respiratory infections
- Response goals
  - Focus on those at highest risk of severe disease
  - Vaccination
  - Postexposure prophylaxis

Enterovirus D68

Disease Overview

- Enterovirus D68 (EV-D68) is one of more than 100 non-polio enteroviruses. Non-polio enteroviruses, like EV-D68, are common, with most infections causing no symptoms or only mild symptoms.
- You are more likely to get infected with enteroviruses during summer and fall, but infections can happen year-round.
- EV-D68 can cause mild to severe respiratory illness or no symptoms at all. Mild symptoms may include runny nose, sneezing, cough, body and muscle aches. Serious symptoms may include wheezing and difficulty breathing.
- In general, infants, children, and teenagers are most likely to get infected with enteroviruses and become ill. Children with asthma may have a higher risk for severe symptoms from EV-D68 and other respiratory illnesses.
- Although rare, acute flaccid myelitis (AFM) can be caused by an D68 infection as well as a few other kinds of enteroviruses. AFM is a neurologic condition that occurs primarily in children. Symptoms include: arm or leg weakness, difficulty swallowing or slurred speech, facial droop or weakness, and pain in the neck, back, arm or legs.
- There is no specific treatment for AFM but seeking medical care immediately if these symptoms develop can help manage the disease. There are clinical trials underway developing monoclonal antibodies as a possible treatment.

Surveillance

- There have been increased numbers of AFM cases in 2014, 2016, 2018 and a much smaller increase in 2022. This pattern began with the emergence of a new strain of D68 that had more affinity for nerve tissue, in 2014.
- Although there are increases in EV-D68 detections in the United States this year, the number of reported cases of AFM has remained relatively low to date. As of September 3, 2024, there have been 13 confirmed cases in 10 states. In past years, increases in EV-D68 respiratory disease have preceded cases of AFM by about 2 weeks. Therefore, vigilance for possible increases in EV-D68 respiratory disease and AFM is important as we move into the fall season.

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
AFM CASES	9	1	4	1	6	0	4	1	1	1

- Clinicians are asked to report patients with AFM to the Massachusetts DPH.

Prevention

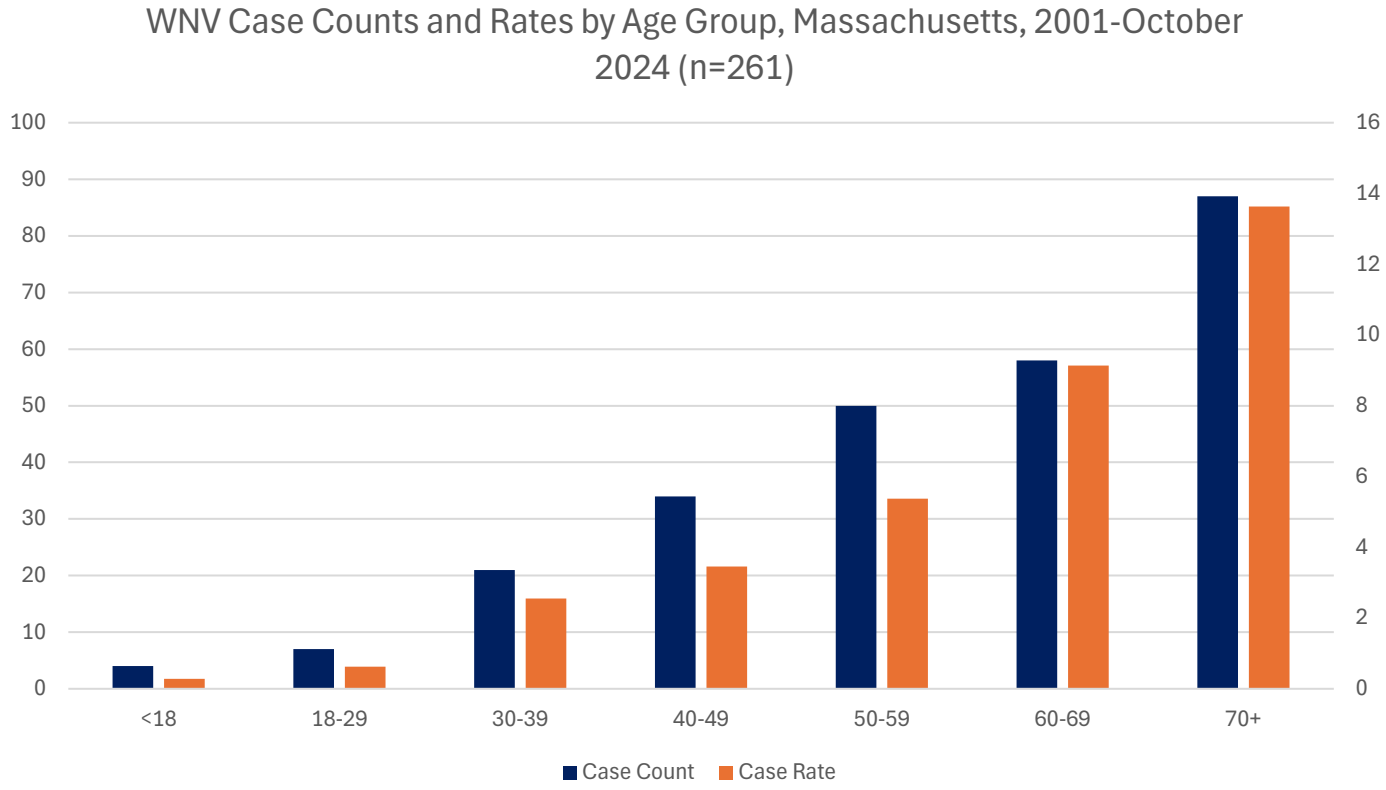
- D68 is spread through respiratory droplets from coughs or sneezes from an infected person. There is no vaccine for D68 but people can help protect themselves from respiratory illnesses using general respiratory hygiene measures.
  - Wash your hands with soap and water frequently. If soap and water are not available, use an alcohol-based hand sanitizer. Teach children the right way to wash their hands.
  - Cove your mouth and nose with your elbow or a tissue when you cough or sneeze.
  - Clean high touch surfaces frequently
  - Stay home when you are sick and keep children home when they are sick. Stay away from others who appear sick (coughing and sneezing)
- Children with asthma who are at higher risk for more severe disease should be sure to take asthma medications as prescribed.
- Staying healthy during respiratory virus season includes getting flu and COVID vaccines, and RSV vaccine for certain age groups.

Mosquito-borne Diseases

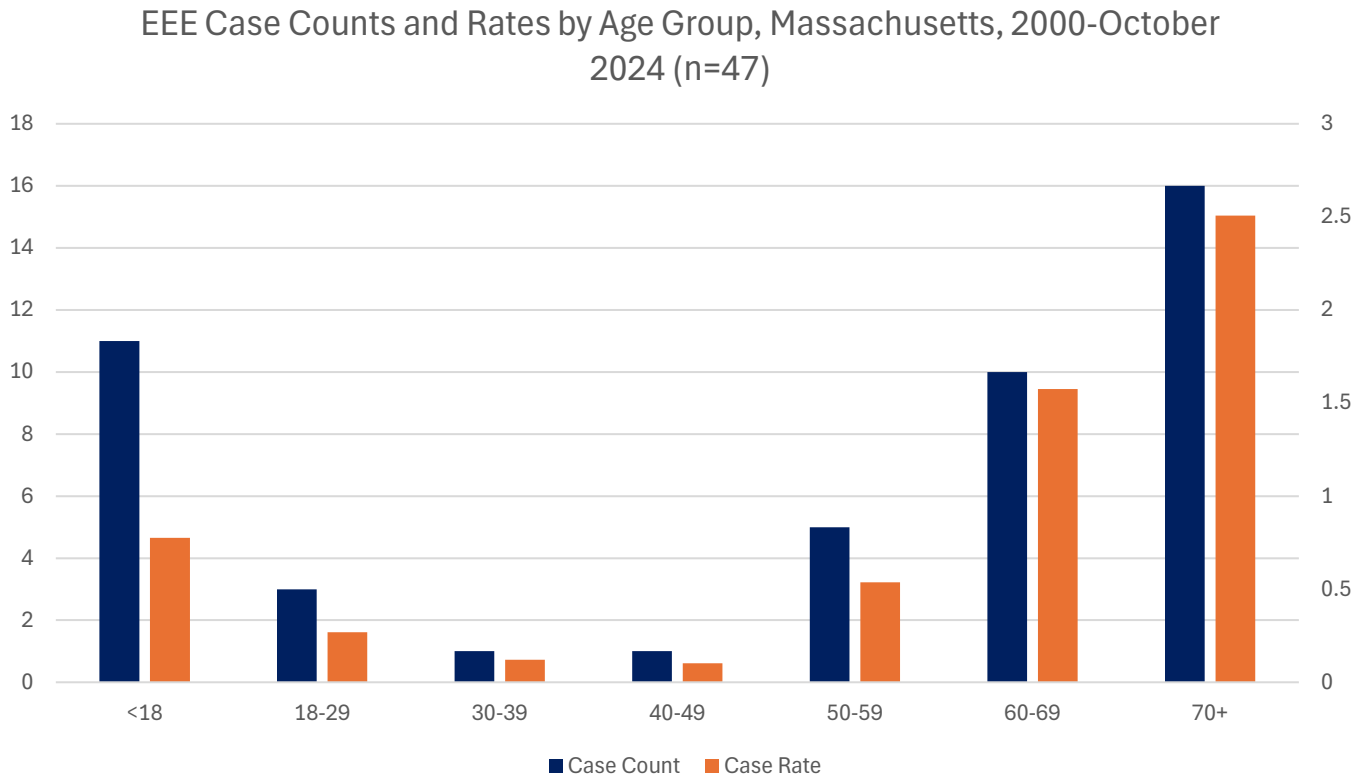
Mosquito-borne Diseases: Overview

	EEE	WNV
Incubation Period	3-10 days	3-14 days
Symptoms	Often abrupt onset of fever, chills, headache, muscle aches, nausea and vomiting, with progression to seizures, coma	80% Mild and sub-clinical infection 20% Headache, sore throat, fatigue, muscle and joint aches, fever
Severity	30-50% mortality rate for those with symptoms ~80% of those who recover have permanent neurological damage Children: 11/43 (25%) cases (33% mortality) Adults: 32/43 (75%) cases (50% mortality)	Age-related severity <1% Aseptic meningitis, encephalitis, meningoencephalitis

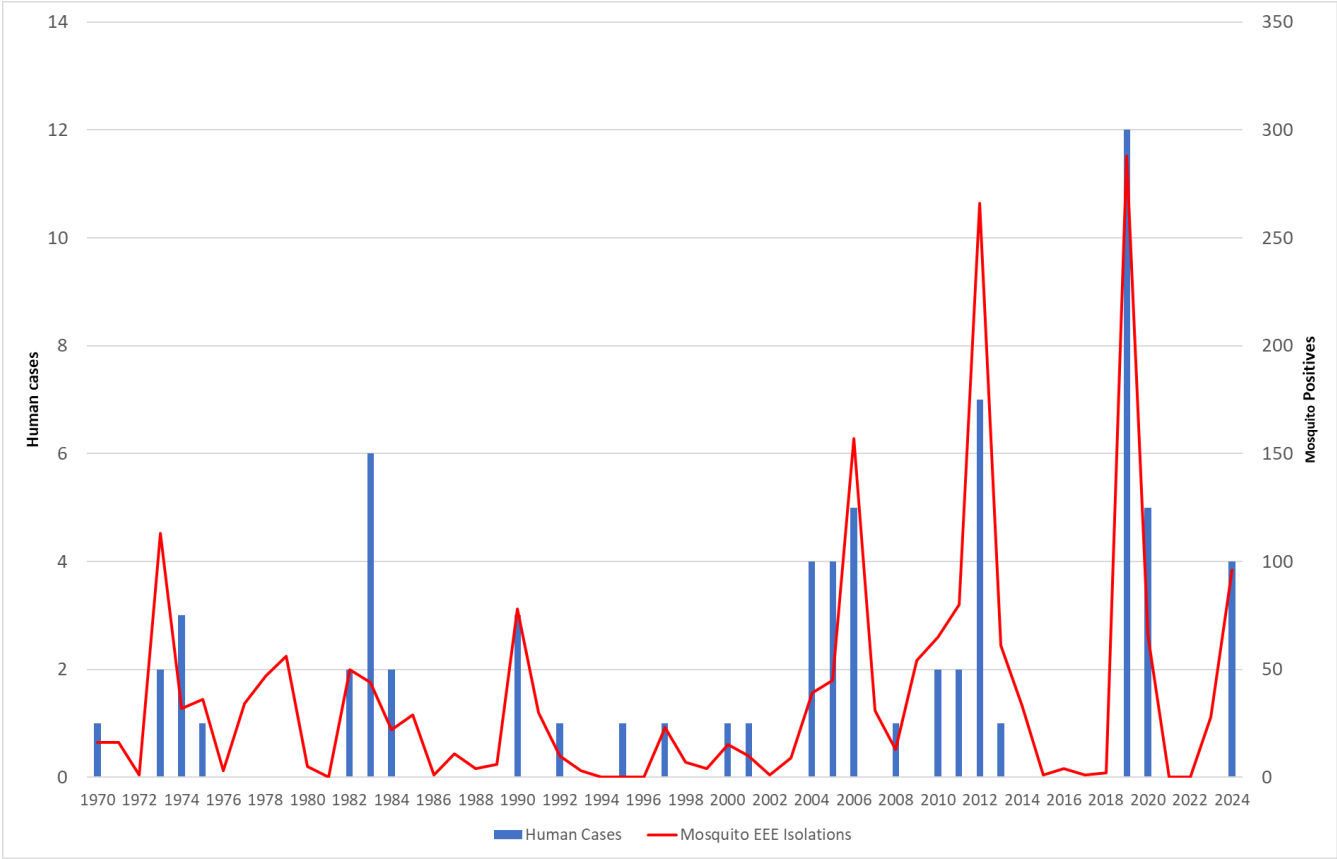
WNV Impact on Children



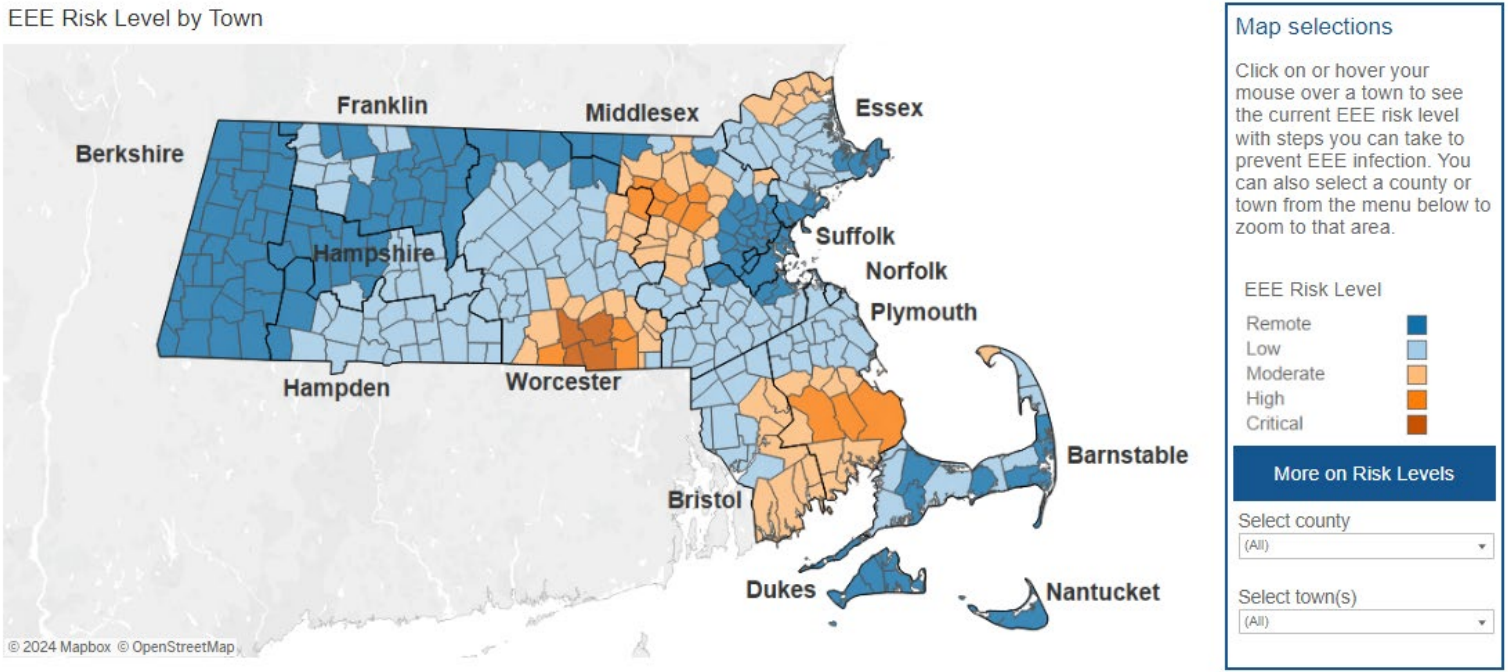
EEE Impact on Children



EEE Mosquito Positives and Human Cases



Risk Levels: EEE



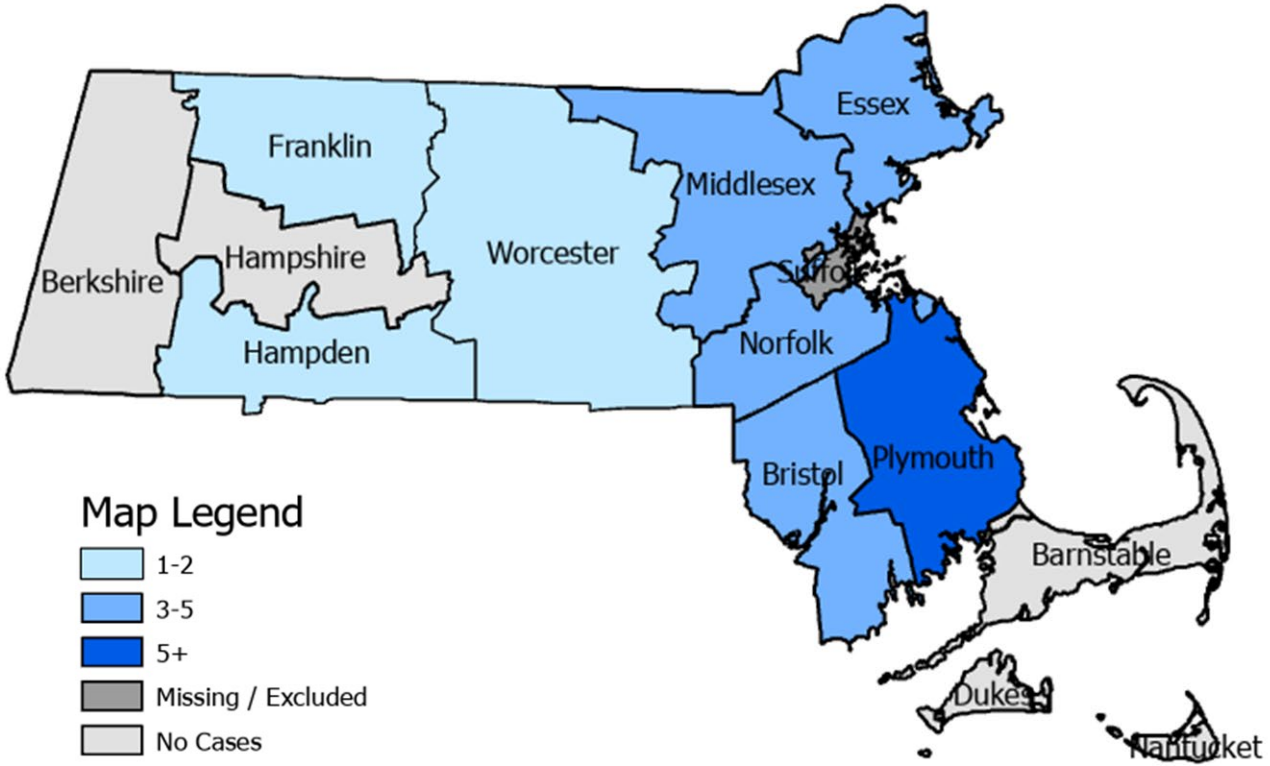
96 Mosquito+

3 Horses+

4 Humans+

https://www.mass.gov/info-details/massachusetts-arbovirus-update

Number of Years with EEE Human Cases, 2004-2023



Resources

Viral Respiratory Illness Dashboards

- https://www.mass.gov/info-details/viral-respiratory-illness-reporting

CDC - Respiratory Illnesses Data Channel

- https://www.cdc.gov/respiratory-viruses/data/index.html

Mosquito-borne Diseases

- https://www.mass.gov/mosquito-borne-diseases

DPH Guide to Surveillance, Reporting and Control

- https://www.mass.gov/handbook/guide-to-surveillance-reporting-and-control

Contact

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Common Respiratory Infections

2024
Safdar Medina, MD, FAAP
Assistant Professor of Pediatrics, UMass Chan School of Medicine
Director of Pediatrics, Tri River Health Center, Uxbridge
Consultant, School Health Unit, Department of Public Health

Respiratory Viruses

Recommendations for Parents and Caregivers

- Ensure children are up-to-date with their vaccinations, including the flu and COVID-19 vaccines.
- Practice and encourage good hygiene, such as regular handwashing with soap and water or alcohol-containing hand sanitizer
- Routine Surface Cleaning
- Keep children home from school or daycare if they are sick to prevent the spread of these viruses.
- Return once fever free for 24 hours off medication and feeling better
- Consider masking if symptomatic
- Consult a healthcare provider if a child exhibits severe symptoms or if there are concerns about potential co-infections

Respiratory Syncytial Virus (RSV)

- **Overview**: RSV is a common respiratory virus that typically causes mild, cold-like symptoms. However, it can be serious in infants and young children. Treatment is supportive care.
- **Transmission**: RSV spreads through respiratory droplets when an infected person coughs or sneezes, and through direct contact with contaminated surfaces.
- Symptoms can appear **2-8 days** after contact with RSV.
- People infected with RSV are usually contagious for **3-8 days**.
- **Symptoms**: Symptoms include runny nose, decrease in appetite, coughing, sneezing, fever, and wheezing.
- **Vaccine**: Monoclonal Antibody available for infants 8 months of age or younger at start of season and those at high risk

Influenza

- **Overview**: Influenza is a contagious respiratory illness caused by influenza viruses, leading to seasonal epidemics.
- **Transmission**: Spreads through droplets and contact with contaminated surfaces.
- **Symptoms**: Common symptoms include fever, chills, muscle aches, cough, congestion, runny nose, headaches, and fatigue.
- **Vaccine**: Annual flu vaccination is recommended for everyone over six months of age.
- **Treatment** with Tamiflu for those at higher risk (individual decision with medical provider); start ideally within 48 hours

  Children younger than 5 years old, especially those younger than 2, and children and adolescents with certain underlying medical conditions, are at a high risk of developing serious influenza-related complications

  a. ***Examples:*** Asthma, Diabetes, Epilepsy, Developmental Disorders, Cerebral Palsy, BMI greater than 95th percentile; Child or Teen on Immunosuppressants

COVID-19

- **Overview**: Caused by the SARS-CoV-2 virus, COVID-19 has a wide range of symptoms and can lead to severe respiratory illness.
- **Transmission**: The virus spreads primarily through respiratory droplets and can also spread via aerosols and contaminated surfaces.
- **Symptoms**: Symptoms range from mild (fever, cough, fatigue) to severe (difficulty breathing, chest pain).
- **Paxlovid:** 12 years of age and over with risk factors: Asthma, Diabetes, Immunocompromised, Developmental Disorders, Cerebral Palsy, BMI > 95th percentile
- **Vaccine:** Recommended for all children 6 months and older.

Common symptoms of all four illnesses include fever, cough, fatigue, stuffy, runny nose and congestion. Some symptoms that may be different include:

Illness	Sudden loss of taste or smell	Headache	Loss of appetite	Sore throat	Sneezing
 COVID-19	✓	✓	✓	✓	
 Flu		✓	✓	✓	✓
 Cold				✓	✓
 Respiratory syncytial virus (RSV)					✓

Mycoplasma Pneumonia

- Increased rates starting July 2024
- Fever and Cough
- Clinical Findings on lung exam; many children have no findings on physical exam and and need a chest x-ray
- Typically school aged children, teens and young adults, but this year more cases in young children
- Lengthy Contact (Schools, Households)
- Airborne Droplets-close person to person contact
- Incubation Period Between 1 and 4 weeks
- Illness can be gradual, with fever occurring later in the course of the illness
- Older children often present without fever–prolonged cough
- Can test using serology
- Treatment Azithromycin or Doxycycline

Group A Strep Pharyngitis

- **Sore Throat, Fever, Cervical Lymphadenopathy, Headache, Abdominal Pain**
- **Respiratory Symptoms Usually Absent**
- **Tonsillar Erythema, Exudate; Palatal Petechiae**
- **Treatment: Penicillin is the gold standard**
- **Return to School: Need to be fever free for 24 hours off fever reducers and feeling well enough to participate in regular activities**
- **AAP: May return to school after 12 hours of antibiotics if above conditions are met**
- **DPH: May return to school after 24 hours of antibiotics if above conditions are met**

Migrant Health

Immunization Records might be incomplete

Every effort should be made to catch them up

Should not be excluded from school–social/emotional/academic concerns

Given our high rates of immunization for required vaccines among school aged children, in the event of a cluster at school, guidelines would be provided for students, if under immunized,

If no records available:

Repeat

Obtain Titers

Migrant Health: Lead Testing

UN report (2020): 1 in 3 children globally have a lead level above 5 mcg/dL

All migrant children ages 16 years of age and under should have a lead test done

- Increased risk of environmental exposure
- Diets that lack in Calcium and Iron (Test Hbg will Lead)
- Certain herbal supplements can have lead in them
- May be asymptomatic
- Developmental Delays from chronic exposure
- Capillary samples above 3.5 mcg/dL must be confirmed with a venous draw

Migrant Health

Labs:

CBC – Higher Rates of Anemia

Vitamin D

Thyroid Function (under 6 years of age)

Hep B, HIV, Hep C

TB (Quantiferon Gold)--High rates of latent TB in certain populations

Migrant Health

Attention to Mental Health

- Trauma
- Screen for Depression, Anxiety
- Adjustment to new Environment
- Bullying
- Social/Emotional Support in School

Migrant Health Case Study #1

- 5 year old moved to the US from the Congo with his father 2 months prior to first visit. He and his father escaped the brutal civil war; witnessed trauma
- Last year, mother died giving childbirth to second child and infant passed away as well
- Living with Dad's Aunt, her husband, and her children
- No vaccine records
- Started vaccines over multiple visits (MMR,Varicella, DTaP, IPV, Hep A,) –3 visits to catch up
- Initial Venous Lead 3.5; due for repeat
- RIght Inguinal Hernia–surgery
- Referral to Mental Health Clinician–Adjusting well to school well, meets monthly to check in

Migrant Health Case 2

- 15 year old from Haiti living in shelter (parents, brother, three sisters, mom pregnant)
- Presented with Depression, Passive Suicidal Ideation, Reported being bullied (racial slur)
- Labs: Positive Quantiferon, Vitamin D Deficiency
- Slow adjustment to school, made friends, participated in sports, and continued monitoring of symptoms; depression improved
- Treated for latent TB with Rifampin
- Treated with high dose Vitamin D
- Transportation was a challenge

Massachusetts Department of Public Health

Tuberculosis in School Aged Children

October 16, 2024

Anna Hippchen, RN, DTN, DNP

Division of Global Populations and Infectious Disease Prevention
Bureau of Infectious Disease and Laboratory Sciences

Objectives

- Discuss latent TB infection versus active TB disease
- Briefly discuss TB epidemiology (global and local)
- Describe Massachusetts Pediatric TB Risk Assessment
- Describe types of tests of TB infection
- Identify when (and when not) to delay school entry
- Describe Directly Observed Therapy (DOT)

I have no conflicts of interest to report.

Global TB Overview

- TB is an airborne infectious disease
- 2 billion people on Earth (1/4) have latent TB infection
- In 2022, 10.6 million people progressed to TB disease, including 1.3 million children
- In 2022, 1.3 million people died of TB
- Second leading cause of death due to an infectious disease, second only to COVID-19

Source: https://www.who.int/news-room/fact-sheets/detail/tuberculosis
Date accessed: 10/7/2024

Local TB Statistics

- In 2023, 224 MA residents were reported and verified as having TB disease
- 4% in school-aged children
- Total incidence rate 3.2 per 100,000 persons (national case rate 2.9)

Source: https://www.mass.gov/lists/tuberculosis-data-and-statistics
Accessed: 10/7/2024

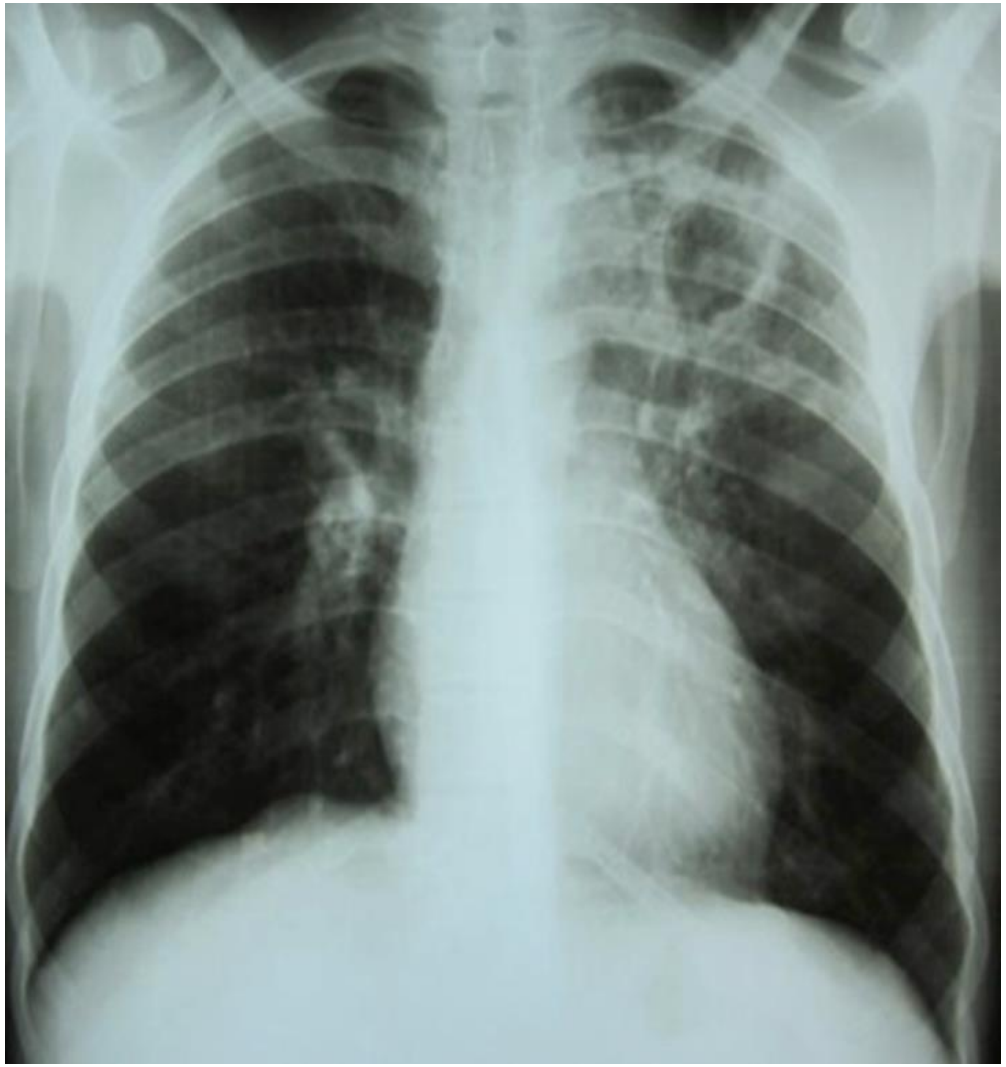
Age (years)	
<5	7 (3%)
5-14	2 (1%)
15-19	6 (3%)
20-24	10 (4%)
25-44	92 (41%)
45-64	51 (23%)
65+	56 (25%)

Latent TB Infection (LTBI)

- Immune system controls but doesn’t clear the infection
- Patients are asymptomatic
- Normal chest X-rays
- Not infectious
- 10% risk for active TB disease at some point in their lives
- Latent TB treatment can reduce this risk
- Three different LTBI treatment regimens:
  - Isoniazid daily x 9 months
  - Rifampin daily x 4 months
  - Isoniazid plus rifapentine weekly x 12 weeks

Active TB Disease

- Can occur decades after primary infection
- Potential medical risk factors:
  - HIV
  - DM
  - ESRD
  - TNF-alpha blockers
  - Chemotherapy
  - Long-term corticosteroid use
  - Immunosuppression after organ transplant
- Psychosocial stressors
- Treatment with 4+ drugs for 6 to 12 months



TB Testing in the School Setting

- Each school district may set its own TB screening policies and procedures
- MA DPH recommends consideration of a TB risk assessment for incoming students
- Indications for TB testing would include:
  - Risks for TB exposure
  - Medical risks for progression to TB disease if exposed

Determining TB Risk in Children

- Birth, extended travel to, or residency in any country other than:
  - United States
  - Canada
  - Japan
  - Australia or New Zealand
  - Western or Northern Europe
- Known exposure to a person with infectious TB disease during the child's lifetime
- History of immunosuppressive disease or use of medications that might cause immunosuppression

Massachusetts Tuberculosis Risk Assessment
Pediatrics

- Use this tool to identify asymptomatic **children and adolescents** to test for latent TB infection (LTBI).
- **Do not repeat testing** unless there are new risk factors since the last negative test.
- **For TB symptoms or abnormal chest X-ray consistent with active TB disease → Evaluate for active TB disease**

Evaluate for active TB disease with a chest X-ray, symptom screen, and if indicated, sputum AFB smears, cultures and nucleic acid amplification testing (NAAT). A negative tuberculin skin test or interferon gamma release assay does not rule out active TB disease.

Latent TB infection testing is recommended if any of the 3 boxes below is checked.

If latent TB infection test result is positive and active TB disease is ruled out, treatment of latent TB infection is recommended.

REPORT Latent TB Infection and Active or Suspected Active TB Disease

Go to www.mass.gov/tuberculosis for reporting forms

☐ **Born or lived in** a country with an elevated TB rate

- Includes any country other than the United States, Canada, Australia, New Zealand, or a country in western or northern Europe.
- Interferon Gamma Release Assay (IGRA) is preferred over Tuberculin Skin Test (TST) for foreign-born persons ≥2 years old. The TST is an acceptable test for all ages when administered and read correctly.

☐ **Immunosuppression**, current or planned

HIV infection, organ transplant recipient; treated with TNF-alpha antagonist (e.g., infliximab, etanercept, others), or immunosuppressive interleukin antagonists, steroids (equivalent of prednisone ≥15 mg/day for ≥1 month) or other immunosuppressive medication

☐ **Close contact** to someone sick with infectious TB disease during lifetime

☐ No TB risk factors. TB test not indicated; no TB test done.

Provider: _____	**Patient Name**: _____
Assessment Date: _____	**Date of Birth**: _____

Targeted TB Testing and the School Health Form

Physical Examination **Date of Examination:** _____

Hgt: _____(____%) Wgt: _____(____%) BMI: _____(____%) BP: _____

(Check = Normal / If abnormal, please describe.)

☐ General _____	☐ Lungs _____	☐ Extremities _____
☐ Skin _____	☐ Heart _____	☐ Neurologic _____
☐ HEENT _____	☐ Abdomen _____	☐ Other _____
☐ Dental/Oral _____	☐ Genitalia _____	

Screening:

	(Pass)	(Fail)
Vision: Right Eye	☐	☐
Left Eye	☐	☐
Stereopsis	☐	☐

	(Pass)	(Fail)
Hearing: Right Ear	☐	☐
Left Ear	☐	☐

	(Pass)	(Fail)
Postural Screening: (Scoliosis/Kyphosis/Lordosis)	☐	☐

Laboratory Results: ☐ Lead _____ Date _____ ☐ Other _____

The entire examination was normal: ☐

Targeted TB Skin Testing: ☐ Med-to-High risk (exposure to TB; born, lived, travel to TB endemic countries; medical risk factors):

TB Test Type: ☐ TST ☐ IGRA Date: _____ Result: ☐ Positive ☐ Negative ☐ Indeterminate/Borderline

Referred for evaluation to: _____ Date: _____ ☐ Low risk (no TB test done)

Tuberculin Skin Test (TST)

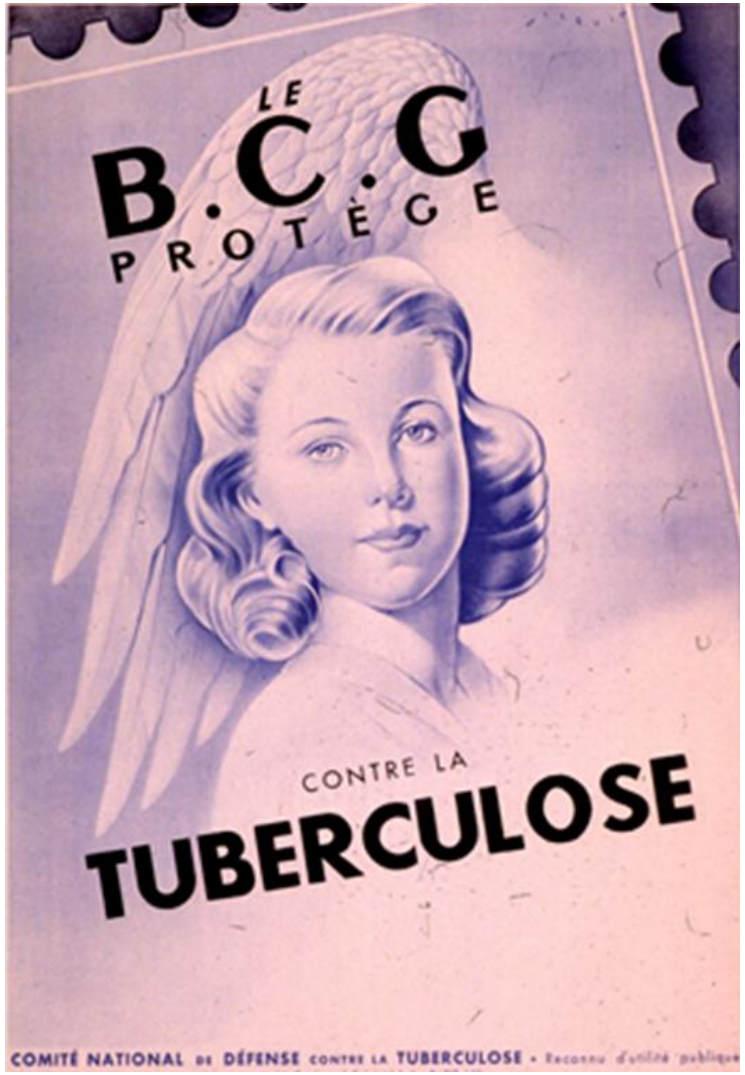
- Screening test for TB infection, not disease
- Also known as PPD: Purified Protein Derivative
- First developed as a vaccine (not effective)
- Cut-off for a positive result depends on risk (both risk of acquisition and activation)
- Usually remains positive for life

False Negative and False Positive TSTs

- False negative TB Skin Tests
  - Anergy (inability to react to skin test due to weakened immune system)
  - Recent TB infection (within 10 weeks of exposure)
  - Remote TB infection (fading immunologic memory)
  - Recent live-virus vaccination (last 4-6 weeks)
  - Overwhelming TB disease
  - Incorrect method of administration or reading
  - Incorrect interpretation of reaction
- False positive TB Skin Tests
  - Infection with nontuberculous mycobacteria (NTM)
  - Incorrect method of administration or reading
  - Incorrect interpretation of reaction
  - Previous BCG vaccination

BCG Vaccination

- Developed by Albert Calmette and Camille Guerin in 1906
- “BCG” – Bacille Calmette-Guerin
- First used in France in 1921
- Never widely adopted in U.S.
- Still one of the most commonly used vaccines worldwide
- Administered to babies at birth in medium and high-incidence TB countries
- Leaves characteristic scar



BCG Vaccination 2

- What it does
  - Protects babies against the most severe forms of TB in childhood
  - Increases risk for false positive TSTs
  - This effect wanes over time
- What it doesn't do
  - Provide lifelong protection against all forms of TB disease
  - Adults with a BCG hx are just as likely to get pulmonary TB as adults without

So, Enter the IGRA

- New blood tests for TB infection developed that would not cross-react with BCG vaccination
- Reduce false positive results in BCG-vaccinated individuals
- First new test for TB infection in 100 years
- IGRA – Interferon Gamma Release Assays
- Two available tests:
  - Quantiferon-TB Gold Plus (QFT)
  - T-Spot TB Test

IGRA Results

Can be affected by:

- Tube filling
- Vigorousness of shaking
- Length of incubation
- Patient's underlying immune status
  - Immunocompromised patients can have indeterminate results
- Recent live virus vaccination or viral illness
  - If possible, recommend delaying IGRA draw 4-6 weeks after live virus vaccination or viral infection

Comparing TB Skin Tests and IGRAs

Both have their strengths and limitations

TB Skin Test	Interferon Gamma Release Assays
Inexpensive	Expensive
Requires 2 visits	Just one visit for blood draw, but…
Affected by prior BCG vaccination	**Not affected by prior BCG**
Subjective interpretation	Lab-reported value
More consistent results	More variability in results
Does not identify TB disease, or patients likely to get TB disease	Does not identify TB disease, or patients likely to get TB disease
	Slightly greater sensitivity

IGRA and TST Agreement by Age

Ho C.S., Feng P.I., Narita M., et al. Comparison of three tests for latent tuberculosis infection in high-risk people in the USA: an observational cohort study. Lancet Inf Dis.2022; 22(1): 85-96.

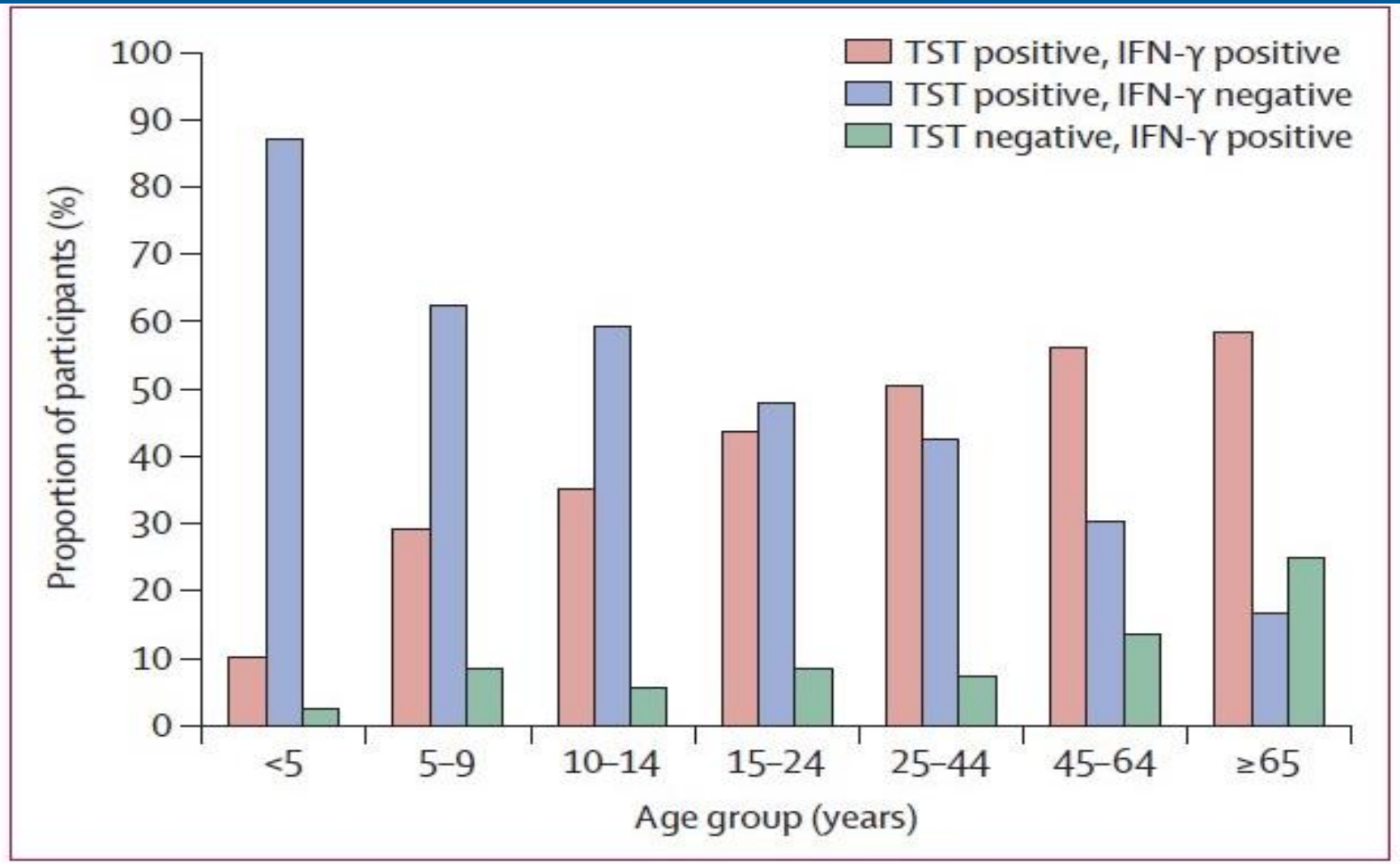


Figure 2: **Test combinations for non-US-born participants with at least one positive test**

IFN-γ denotes either IFN-γ release assay. TST=tuberculin skin test.

If a Child Has a Positive TST or IGRA?

Evaluation of Children with Positive TST or IGRA

- Detailed heath history, family history, and physical exam
- Chest radiograph
- Evaluation of signs and symptoms
  - Cough or fever for 2-3 weeks or more
  - Loss of weight or failure to gain weight
  - Lethargy
  - Lymphadenopathy

Latent TB and active TB disease are both reportable conditions in Massachusetts.

TB and School Entry

- Asymptomatic children with pending chest X-ray results should not be excluded from school for a positive TST or IGRA
- Families should be counseled on importance of medical evaluation and encouraged to consider preventative treatment for TB infection if prescribed

Online Resource

Tuberculosis Screening in Children: Information for Massachusetts School Nurses

Guidance from the Massachusetts Department of Public Health (DPH) on the risk-based approach to screening for TB, methods of testing for TB infection, and the symptoms of active TB disease.

Tuberculosis (TB) is an airborne infectious disease caused by *Mycobacterium tuberculosis*. Screening can identify children at increased risk for TB infection, and who may benefit from TB testing. Treatment is available to reduce the risk of developing active TB, and medications are available to cure TB disease.

TB Risk Assessment and Testing

Summary

- DPH recommends that school-aged children in Massachusetts public or private schools should have a Pediatric Tuberculosis Risk Assessment completed and documented on the school health form.
- The Pediatric TB Risk Assessment may be performed by school nurses, primary care providers, pediatric clinics, or local public health nurses.
- Children who are at risk of exposure to TB should be tested for TB infection using either the Mantoux tuberculin skin test (TST) or interferon-gamma release assay (IGRA). IGRAs are preferred over TSTs for persons 2 years of age or older with a history of BCG vaccination.
- Children with positive TST or IGRA results should receive a TB symptom screen and be referred for medical evaluation.
- Symptoms that should prompt urgent medical evaluation include unexplained cough for more than 2-3 weeks, fevers, night sweats, weight loss or failure to gain weight, lymphadenopathy, or excessive fatigue.
- Asymptomatic children with positive TSTs or IGRAs and pending chest X-ray results should not be excluded from school but should complete a medical evaluation as soon as possible and preferably within 90 days.

Managing a Child with Active TB

- Young children with active TB disease, even pulmonary TB, are generally not infectious to others
- Source case investigation will be initiated to identify any family members or caregivers who may need TB evaluation and treatment
- Child with active TB will be monitored by local public health nurse, with support from state TB nurses for duration of treatment
- Sometimes will remain home from school for two weeks from the start of treatment
- Treatment is administered under directly observed therapy (DOT), which may be provided at school

School-based DOT

- Directly Observed Therapy at school has been used effectively for some families with children with TB
  - This would only be initiated after discussions with the family, school health teams, state TB nurses, and local boards of health
- Monitor side effects of medications
- Support adherence
- Communicate with parents and the local public health nurse if missed doses

TB Contact Investigations in Schools

- A contact investigation (CI) in schools may be indicated if a person is considered to have been infectious to others
- The CI is a partnership between the school district, the local board of health, and the MA Dept of Public Health (MDPH)
  - Identification, notification, and testing for exposed individuals
  - Sample letters available to assist schools in notifications
  - Onsite IGRA testing by Quest may be provided
  - All efforts made to protect the person's confidentiality
- MDPH offers informational sessions for community education and to field questions from parents/guardians
  - Generally evening Zoom sessions to maximize participation
- Outreach to local pediatricians may also be provided by MDPH

Take Home Points

- Not all children are at equal risk of TB infection
- Massachusetts Pediatric TB Risk Assessment can help identify those who would benefit from testing
- Testing for TB infection may include a TST or IGRA
- IGRAs are preferred for children who have received BCG
- Children with positive tests should be referred for evaluation
- Asymptomatic children with positive tests of TB infection should not be excluded from school entry
- School nurses can help support treatment for children with active TB and latent TB infection with school-based directly observed therapy

Resources

1. TB Information Sheet for Massachusetts School Nurses
https://www.mass.gov/info-details/tuberculosis-screening-in-children-information-for-massachusetts-school-nurses

2. Massachusetts Pediatric TB Risk Assessment
mass.gov/doc/massachusetts-tuberculosis-risk-assessment-pediatrics/download

3. Massachusetts Pediatric Tuberculosis Risk Assessment User Guide
mass.gov/doc/massachusetts-pediatric-tuberculosis-risk-assessment-user-guide/download

4. Information on TB for Patients and Families in English and 23 other languages
mass.gov/lists/tb-information-for-your-patients-in-english-and-other-languages

5. BCG World Atlas, McGill University
bcgatlas.org/index.php

Questions ?

Contact

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School Immunization Survey

Data Assessment Unit, Immunization Division

Bureau of Infectious Disease and Laboratory Sciences

Massachusetts Department of Public Health

10/16/2024

Christopher Tocci, School Immunization Epidemiologist

Agenda

- School Immunization Requirements
- School Immunization Survey Timeline
- 2023-2024 Survey Summary Results
    - Response Rates
    - Compliance Rates
    - Exemption Rates
- Questions!

School Requirements*

- Immunization requirements exist for school entry for every child enrolled in **public or private** school from early childhood through college
- Requirements apply to all students, even if over 18 years of age
- School requirements are enforced at the local level
- Influenza and COVID-19 vaccines are not required by the state for school entry
- Students on catch-up timelines may not be considered compliant for the survey – However, they may be immunologically safe

Childcare/Preschool¶†

Attendees <2 years should be immunized for their age according to the ACIP Recommended Immunization Schedule. Requirements listed in the table below apply to all attendees ≥2 years. These requirements also apply to children in preschool classes called K0 or K1.

Hib	**1–4 doses;** number of doses is determined by vaccine product and age the series begins
DTaP	**4 doses**
Polio	**3 doses**
Hepatitis B	**3 doses;** laboratory evidence of immunity acceptable
MMR	**1 dose;** must be given on or after the 1st birthday; laboratory evidence of immunity acceptable
Varicella	**1 dose;** must be given on or after the 1st birthday; a reliable history of chickenpox* or laboratory evidence of immunity acceptable

Grades Kindergarten–6¶†

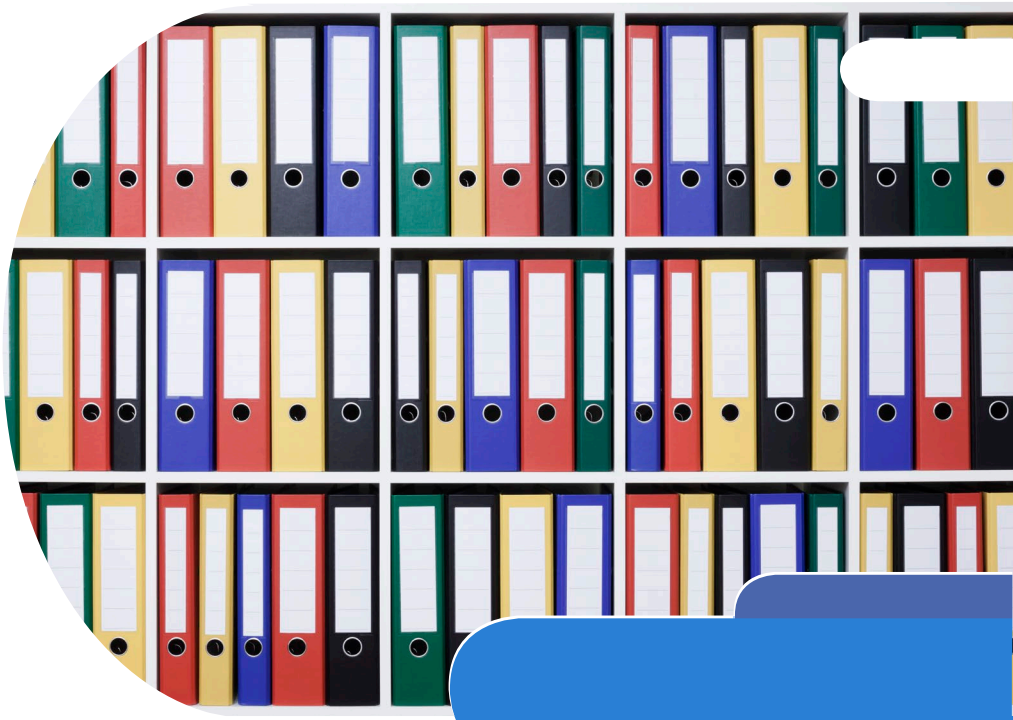
In ungraded classrooms, Kindergarten requirements apply to all students ≥5 years.

DTaP/Tdap	**5 doses;** 4 doses are acceptable if the fourth dose is given on or after the 4th birthday; DT is only acceptable with a letter stating a medical contraindication to DTaP
Polio	**4 doses;** fourth dose must be given on or after the 4th birthday and ≥6 months after the previous dose or a fifth dose is required; 3 doses are acceptable if the third dose is given on or after the 4th birthday and ≥6 months after the previous dose
Hepatitis B	**3 doses;** laboratory evidence of immunity acceptable
MMR	**2 doses;** first dose must be given on or after the 1st birthday, and second dose must be given ≥28 days after first dose; laboratory evidence of immunity acceptable
Varicella	**2 doses;** first dose must be given on or after the 1st birthday and second dose must be given ≥28 days after first dose; a reliable history of chickenpox* or laboratory evidence of immunity acceptable

*Exemption to requirements: *medical* and *religious* must and should, respectively, be renewed annually.

Immunization Records & Exemptions

- Student immunization records should be collected each year a student is enrolled – **NOT** just the grades student compliance is surveyed
- Medical exemptions **MUST** be renewed annually – with a statement from a physician that the vaccine is medically contraindicated
- Religious exemptions should be renewed annually – with a statement from the student or guardian that the vaccine conflicts with sincerely held religious beliefs



School requirements and medical exemptions are authorized under 105 CMR 220.00: Immunization of students before admission to school

Exclusion from School

- Unimmunized and under-immunized students who do not have medical or religious exemptions **may be** excluded from school
  - Exclusion from school is determined by local governance (e.g., school district)
  - Exception for *Every Student Succeeds Act* students
- Exposure to or outbreak of vaccine preventable disease may result in mandatory exclusion from school according to MDPH's exclusion criteria and guidelines document (see link)

Exclusion Guidelines in School Settings:
https://www.mass.gov/doc/vaccine-preventable-disease-exclusion-guidelines-in-school-settings-0/download

Additional information on exclusion criteria may be found in 105 CMR: 220. Additional information on isolation and quarantine requirements may be found in 105 CMR: 300.

School Survey Goals

School immunization requirements and assessment of compliance help

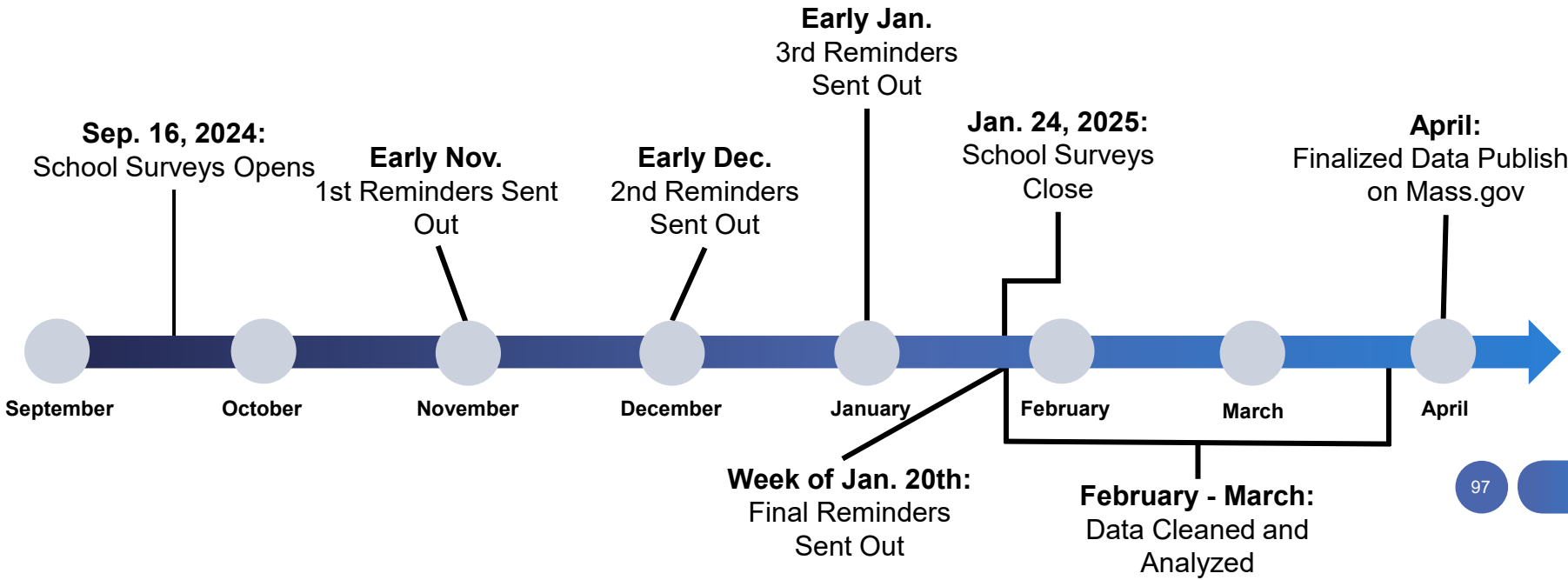
1. Drive health-seeking behavior
2. Provide vaccine coverage data at the school level for local stakeholders
3. Assess trends in vaccine coverage over time
4. Inform public health policy and programming
5. Build open lines of communication between MDPH and school communities

Survey Timeline

Immunization surveys are collected for the following grades:

Childcare/Preschool, Kindergarten, Grade 7, Grade 12, and College

No influenza surveys will be collected for 2024-2025



Survey Access

Childcare/Preschool & College

- No MIIS access required to complete these surveys.
- Surveys accessed through unique links emailed to school contacts. ***Do not share links.***
- Do not use the same link for multiple programs. Separate links are sent for each program.
- These links are sent at the start of the survey period and are included in reminder emails.
- These surveys will not allow you to save partially completed surveys.

- Can't find your link? Check your junk mail folder or reach out to immassessmentunit@mass.gov

Kindergarten, Grade 7, Grade 12

- Surveys completed in the MIIS, and participants need MIIS access to complete the survey.
- If you have a childcare/preschool program in your school, MIIS also shows the link to access the preschool survey.
- MIIS allows you to save partially completed surveys and return to them at a later time.

- For questions and technical issues please reach out to miishelpdesk@mass.gov

Useful Definitions

- Immunization rates and response rates are subject to change throughout the year as students present medical records or move between schools; this is a snapshot of immunization status when surveys were submitted.
- **Response Rate =** Proportion of schools that responded to the survey
- **Non-responder Rate =** Proportion of schools that did not respond to the survey
- **Compliance Rate =** Proportion of students who meet school requirements or have exemptions on file for the missing vaccines
- **Series Complete Rate =** Proportion of students who meet school requirements
    - Does not include students with exemptions
- **Exemption Rate =** Proportion of students with medical or religious exemption on file
- **Students with No Records =** Students without **ANY** immunization records or exemptions on file
- **Non-compliance or Gap Rate =** Proportion of students who neither meet school requirements nor have an exemption on file
    - Immune status of these students is unknown

Immunization Survey Data

2023 – 2024

Summary Results: Kindergarten, Grade 7, & Grade 12

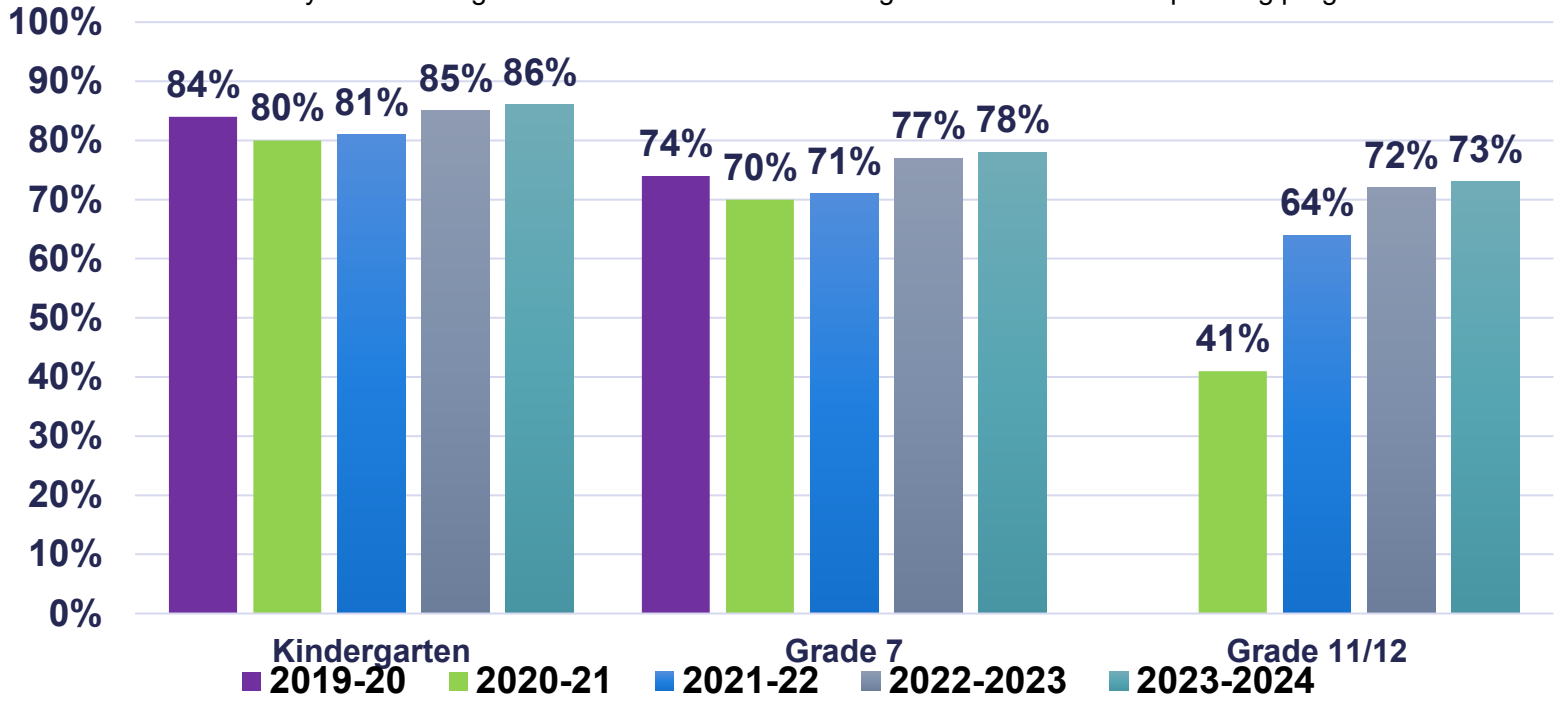
Total Schools In MA: 2,252

Total Surveys Submitted: 2,428

Total Students Assessed: 204,848

Response Rate by Grade

- Very consistent response rates across all grades.
- Slight increase in response rates this year in each grade.
- Beginning with the 2023-24 school year, the Grade 11 & 12 school immunization requirements were assessed for compliance at Grade 12 rather than Grade 11.
- May reflect changes in denominators due to changes in status and de-duplicating programs.



Compliance with Immunization Requirements

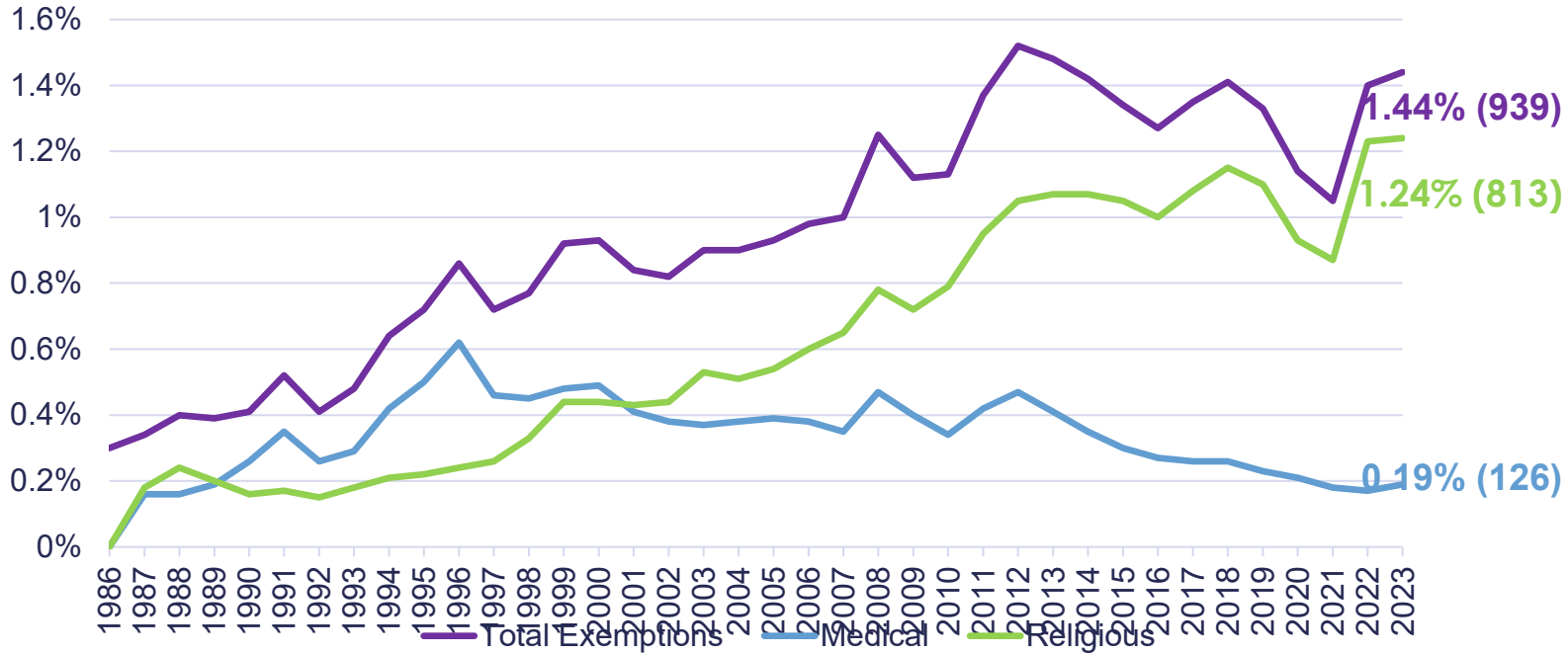
- Overall compliance rates remained consistent into this year
- Grade 12 saw a sharp uptick in students meeting all requirements (up by 14% from last year)
- Grade 12 non-compliance rate fell over 14% from last year
- Increase in Grade 12 coverage (and fall in non-compliance) most likely represents a shift from surveying Grade 11 to Grade 12
- Other grades had consistent non-compliance and exemption rates as last year

Percentage of Students Compliant with Immunization Requirements				
	2020-21	**2021-22**	**2022-23**	**2023-24**
Kindergarten	94%	94%	95%	**94%**
Grade 7	88%	89%	91%	**90%**
Grade 12	72%	70%	75%	**89%**

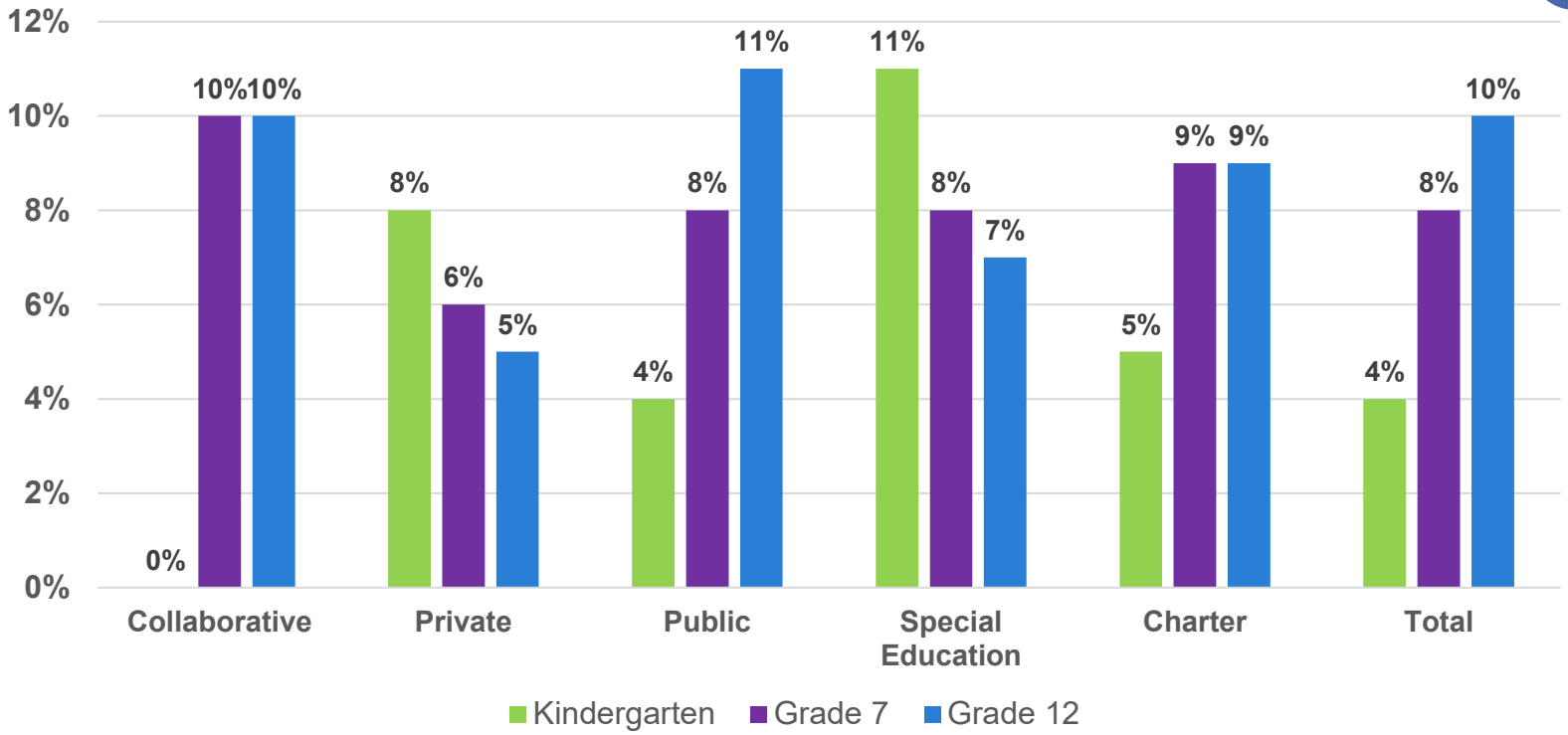
2023-2024 Non-compliance & Exemption Rates		
	Non-compliance*	Total Exemption
Kindergarten	4.3%	1.4%
Grade 7	8.3%	1.2%
Grade 12	10.2%	1.0%

*Non-compliance: children who have neither evidence of meeting requirements nor exemptions on file

Religious and Medical Exemption Rates among Massachusetts Kindergarten Students, 1986-2023

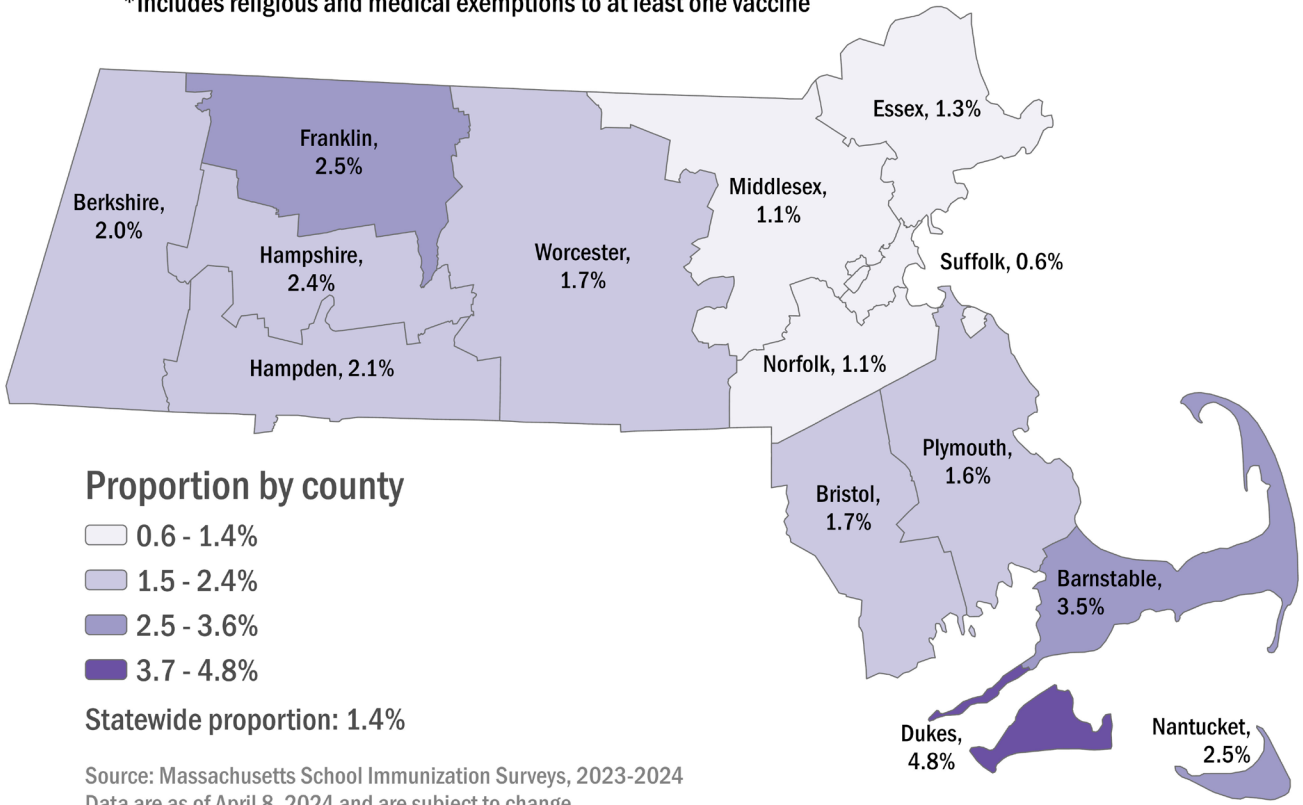


Non-compliance Rate by School Type



Proportion of Kindergarten Students with an Exemption* by Massachusetts County, 2023-2024

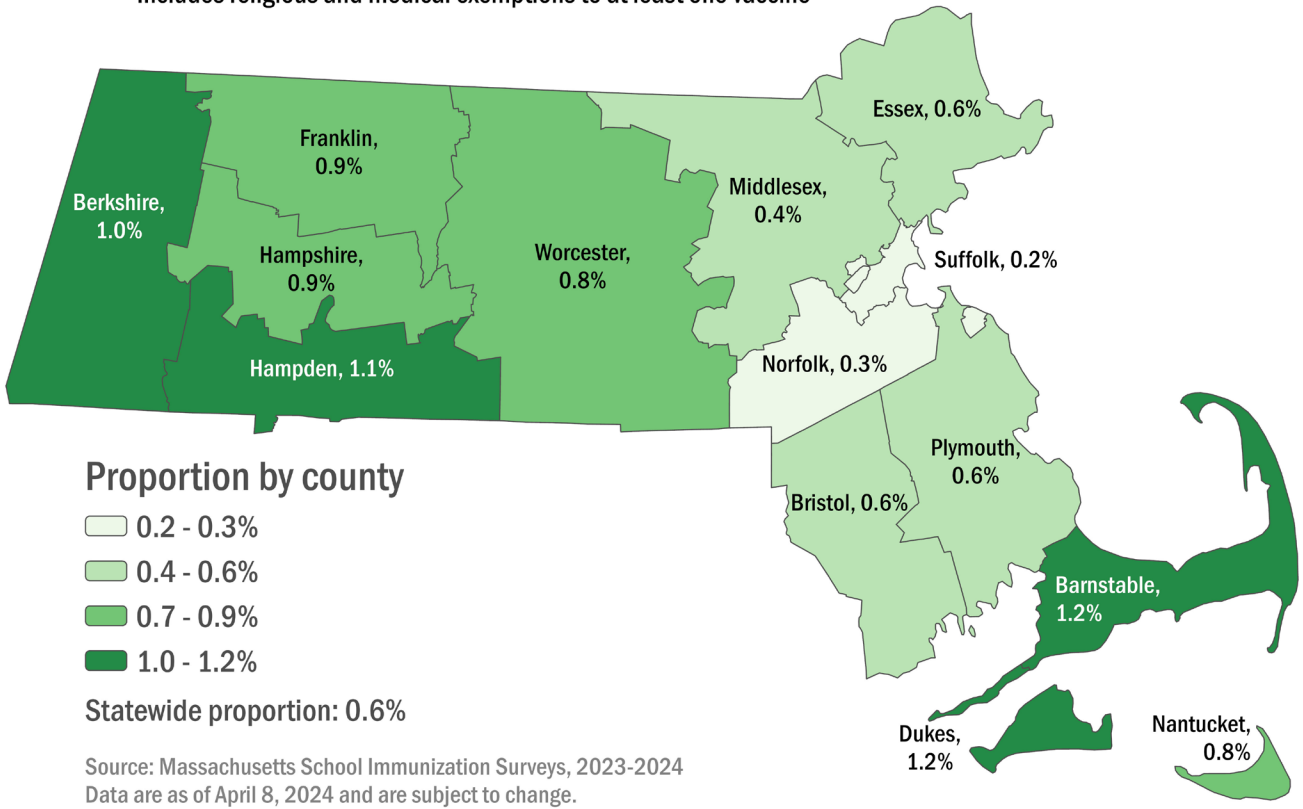
*Includes religious and medical exemptions to at least one vaccine



Source: Massachusetts School Immunization Surveys, 2023-2024
Data are as of April 8, 2024 and are subject to change.
Created by the Division of Surveillance, Analytics and Informatics, Bureau of Infectious Disease and Laboratory Sciences, April 2024.

Proportion of Kindergarten Students with an Exemption* and No Documented Vaccines by Massachusetts County, 2023-2024

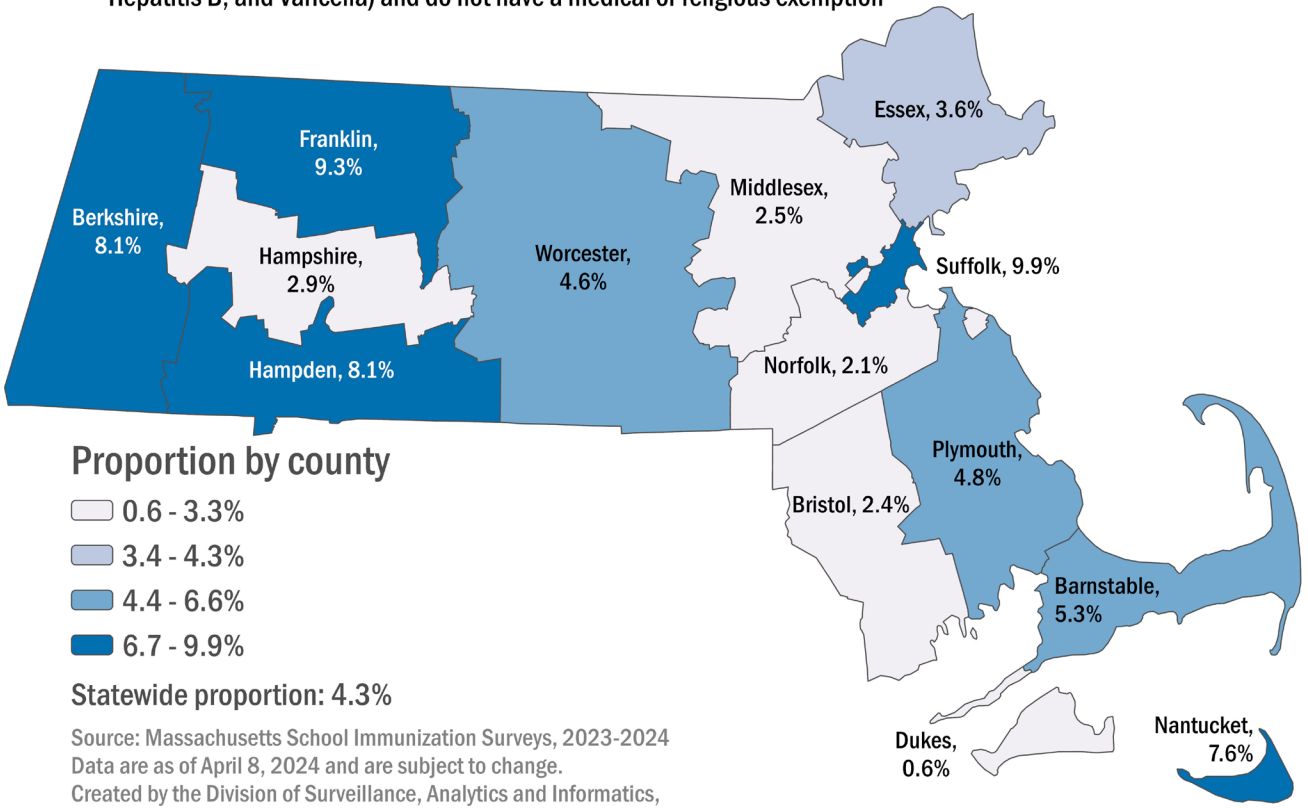
*Includes religious and medical exemptions to at least one vaccine



Source: Massachusetts School Immunization Surveys, 2023-2024
Data are as of April 8, 2024 and are subject to change.
Created by the Division of Surveillance, Analytics and Informatics,
Bureau of Infectious Disease and Laboratory Sciences, April 2024.

Proportion of Kindergarten Students Not Meeting School Requirements* by Massachusetts County, 2023-2024

*Students who are not fully vaccinated for Kindergarten entry (DTaP, Polio, MMR, Hepatitis B, and Varicella) and do not have a medical or religious exemption



Statewide proportion: 4.3%

Source: Massachusetts School Immunization Surveys, 2023-2024
Data are as of April 8, 2024 and are subject to change.
Created by the Division of Surveillance, Analytics and Informatics, Bureau of Infectious Disease and Laboratory Sciences, April 2024.

Where to Find Published Survey Data

School Immunizations

https://www.mass.gov/info-details/school-immunizations

Information about school immunization requirements and data

School immunization requirements exist to protect students and members of their community from serious vaccine-preventable diseases by ensuring high vaccination rates.

School immunization rates provide insight into the vaccine coverage in communities across the state. Since immunization rates are not uniform across the state, school immunization data highlight areas that may be more susceptible to vaccine-preventable diseases. These data also show the importance of maintaining high immunization rates.

TABLE OF CONTENTS

Kindergarten Immunization Data by School 2023-2024

See "Notes" Tab for Explanation of Symbols and Limitations: * Did not respond; † Fewer than 30 students; ¶ Data discrepancies; ‡ Negative Gap

SCHOOL NAME	SCHOOL TYPE	MUNICIPALITY	COUNTY	5 DTAP	4 POLIO	2 MMR	3 HEP B	2 VARICELLA	SERIES	EXEMPTION	UN-IMMUNIZED	NO RECORD	GAP
TRINITY CHRISTIAN ACADEMY	PRIVATE	BARNSTABLE	BARNSTABLE	†	†	†	†	†	†	†	†	†	†
WEST BARNSTABLE ELEMENTARY	PUBLIC	BARNSTABLE	BARNSTABLE	94%	98%	96%	96%	96%	94%	2%	2%	0%	4%
CAPE COD ACADEMY	PRIVATE	BARNSTABLE	BARNSTABLE	†	†	†	†	†	†	†	†	†	†
CENTERVILLE ELEMENTARY	PUBLIC	BARNSTABLE	BARNSTABLE	98%	98%	98%	98%	98%	98%	2%	2%	0%	0%
WALDORF SCHOOL OF CAPE COD	PRIVATE	BARNSTABLE	BARNSTABLE	*	*	*	*	*	*	*	*	*	*
BARNSTABLE COMMUNITY INNOVATION SCHOOL	PUBLIC	BARNSTABLE	BARNSTABLE	96%	96%	96%	95%	96%	93%	5%	4%	0%	3%
HYANNIS WEST ELEMENTARY	PUBLIC	BARNSTABLE	BARNSTABLE	94%	95%	97%	97%	97%	94%	0%	0%	0%	6%
ACADEMY OF EARLY LEARNING	PRIVATE	BARNSTABLE	BARNSTABLE	*	*	*	*	*	*	*	*	*	*
WEST VILLAGES ELEMENTARY SCHOOL	PUBLIC	BARNSTABLE	BARNSTABLE	93%	94%	93%	93%	92%	89%	0%	0%	1%	11%
FAITH CHRISTIAN SCHOOL	PRIVATE	BARNSTABLE	BARNSTABLE	*	*	*	*	*	*	*	*	*	*
CAPE COD COLLABORATIVE	COLLABORATIVE	BARNSTABLE	BARNSTABLE	†	†	†	†	†	†	†	†	†	†
FAIR ACRES COUNTRY DAY SCHOOL	PRIVATE	BARNSTABLE	BARNSTABLE	*	*	*	*	*	*	*	*	*	*
BRIDGEVIEW MONTESSORI SCHOOL	PRIVATE	BOURNE	BARNSTABLE	*	*	*	*	*	*	*	*	*	*
BOURNEDALE ELEMENTARY	PUBLIC	BOURNE	BARNSTABLE	97%	97%	97%	97%	97%	97%	3%	3%	0%	0%
INDEPENDENCE ACADEMY	PRIVATE	BOURNE	BARNSTABLE	*	*	*	*	*	*	*	*	*	*
STONY BROOK ELEMENTARY	PUBLIC	BREWSTER	BARNSTABLE	92%	90%	90%	97%	88%	88%	3%	0%	0%	8%
THE LAUREL SCHOOL	PRIVATE	BREWSTER	BARNSTABLE	*	*	*	*	*	*	*	*	*	*
CHATHAM ELEMENTARY	PUBLIC	CHATHAM	BARNSTABLE	83%	87%	80%	90%	87%	77%	0%	0%	10%	23%
EZRA H BAKER	PUBLIC	DENNIS	BARNSTABLE	91%	91%	91%	92%	88%	88%	1%	1%	6%	11%
EASTHAM ELEMENTARY SCHOOL	PUBLIC	EASTHAM	BARNSTABLE	†	†	†	†	†	†	†	†	†	†
EAST FALMOUTH ELEMENTARY	PUBLIC	FALMOUTH	BARNSTABLE	98%	98%	98%	100%	95%	95%	2%	0%	0%	2%
MULLEN-HALL ELEMENTARY	PUBLIC	FALMOUTH	BARNSTABLE	94%	94%	94%	97%	90%	89%	2%	0%	0%	10%
NORTH FALMOUTH ELEMENTARY	PUBLIC	FALMOUTH	BARNSTABLE	90%	90%	90%	95%	90%	90%	10%	2%	0%	0%
TEATICKET ELEMENTARY	PUBLIC	FALMOUTH	BARNSTABLE	95%	93%	95%	97%	92%	90%	3%	2%	0%	7%
HARWICH ELEMENTARY	PUBLIC	HARWICH	BARNSTABLE	86%	86%	85%	93%	85%	80%	5%	2%	0%	15%
K C COOMBS SCHOOL	PUBLIC	MASHPEE	BARNSTABLE	97%	97%	97%	97%	97%	97%	3%	0%	0%	0%
ORLEANS ELEMENTARY	PUBLIC	ORLEANS	BARNSTABLE	†	†	†	†	†	†	†	†	†	†
PROVINCETOWN SCHOOLS	PUBLIC	PROVINCETOWN	BARNSTABLE	†	†	†	†	†	†	†	†	†	†

THANK YOU!

Questions?

immassessmentunit@mass.gov

Massachusetts Department of Public Health

Office of Local and Regional Health: Public Health Excellence Grant

October 16, 2024

Caitlin Pettengill, DNP, RN
Chief Local Public Health Nurse

Kristin Black, PhD, MS
Director of Shared Services

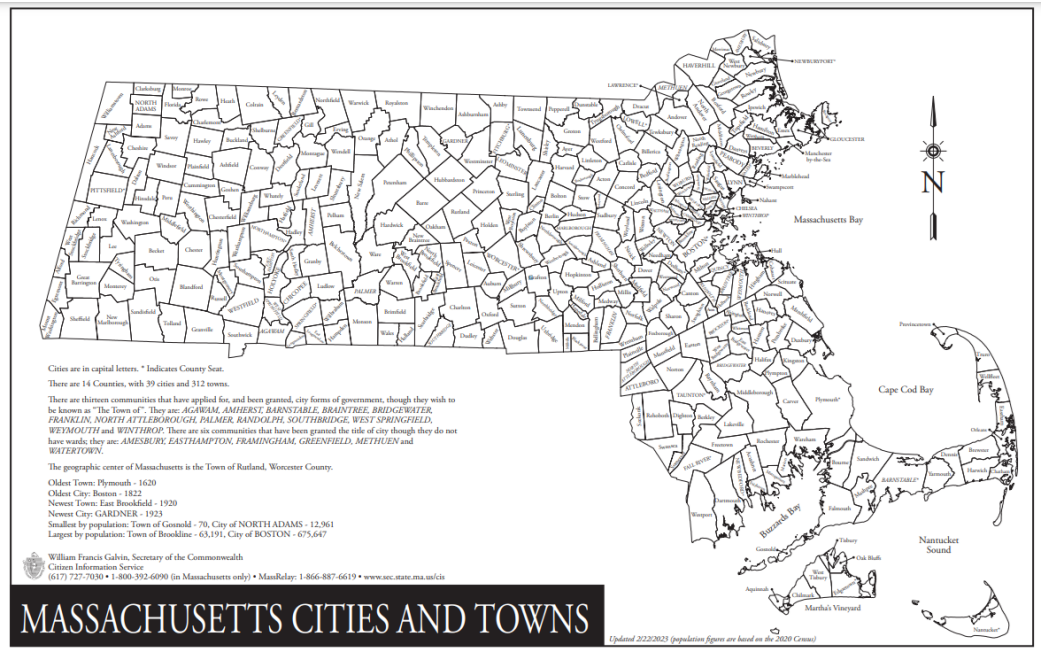
Agenda

- About the Office of Local and Regional Health
- Public Health Excellence Shared Services Grant Program
  - Background
  - Shared Service Arrangements (SSAs)
  - Services provided by SSAs
  - Benefits and Success Stories
- How can school nurses collaborate with SSAs?
- Questions

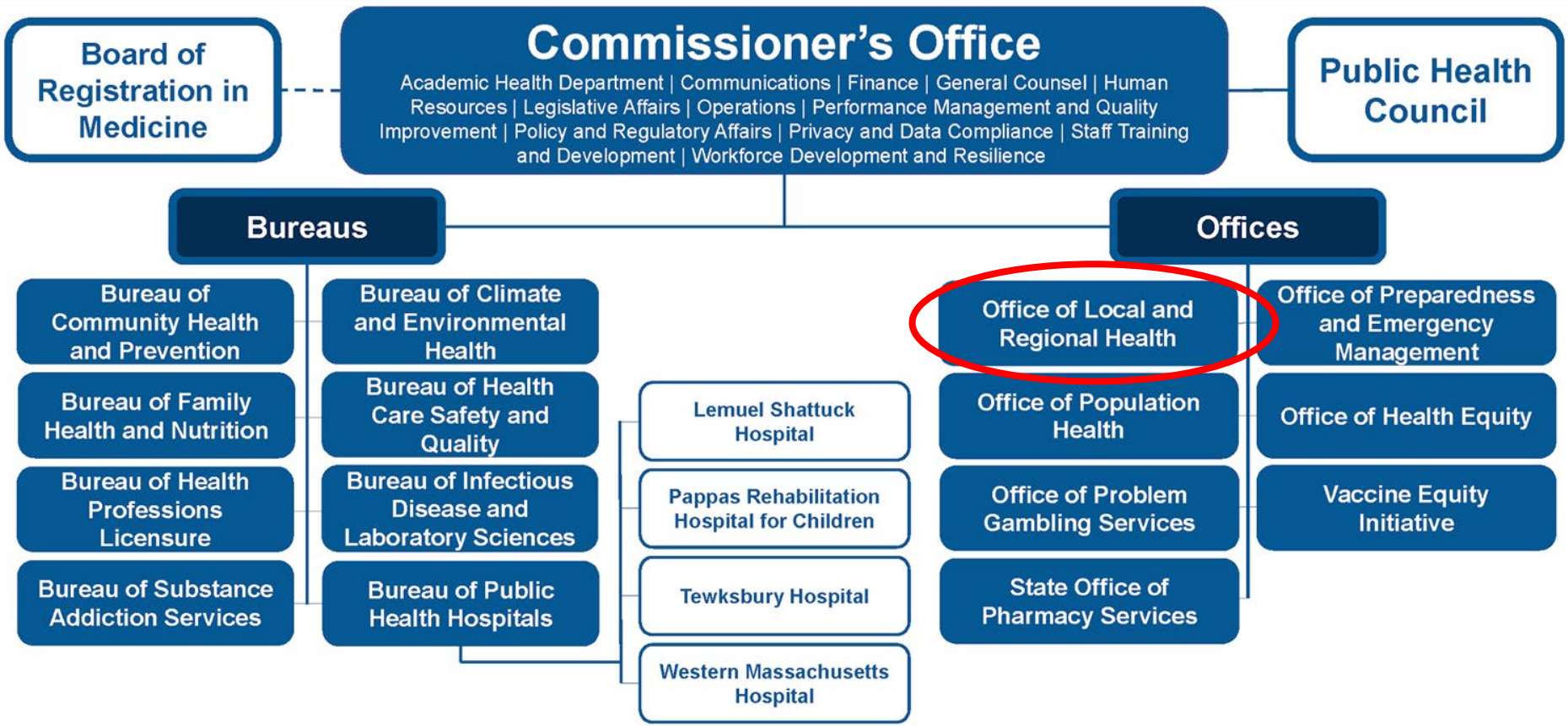
About the Office of Local and Regional Health (OLRH)

Massachusetts Local Public Health System

- Unique local health structure with representation across all 351 localities
- No dedicated non-competitive state funding for local health
- Extensive inequities in resources received and services provided
- Home rule state



Massachusetts Department of Public Health

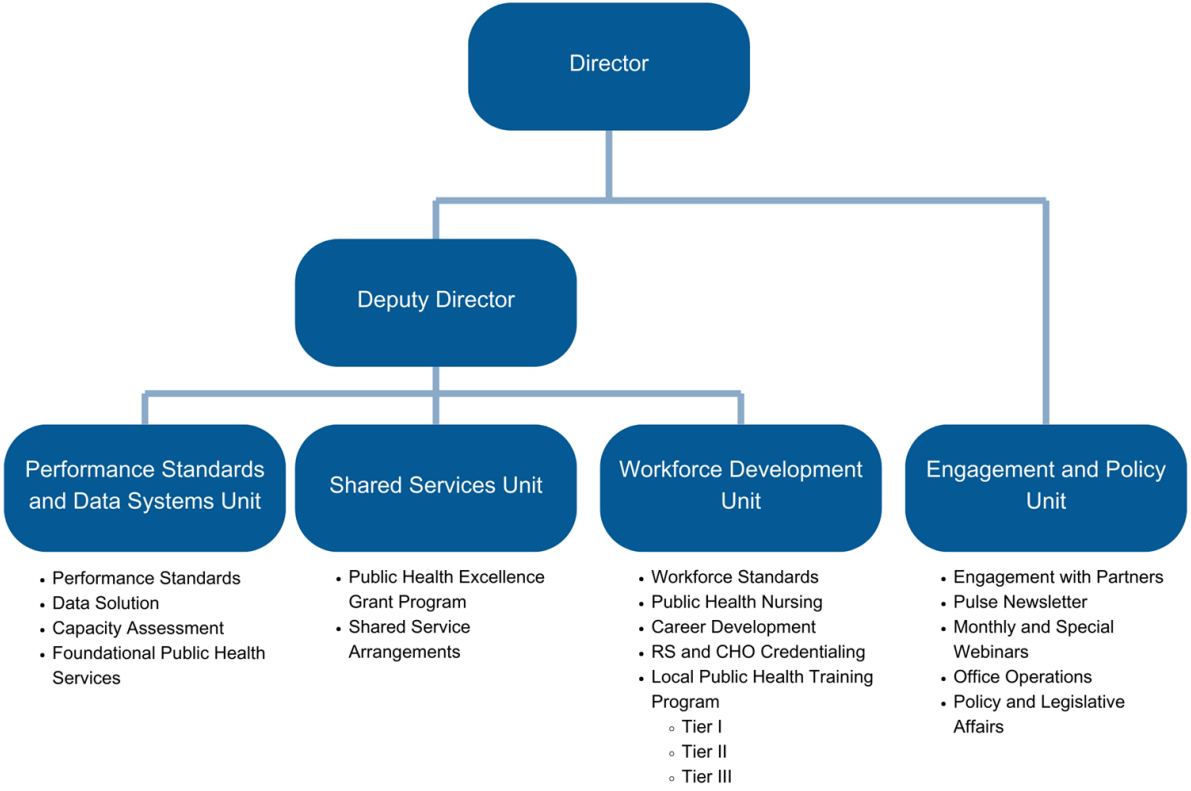


About Office of Local and Regional Health

OLRH was created in 2013 to:

- **Provide a coordinated system,** which is dedicated to addressing local public health needs across Massachusetts
- **Connect our local health partners with DPH** programs, services, and resources
- **Enhance public health capacity** at the local and state level

Organizational Structure

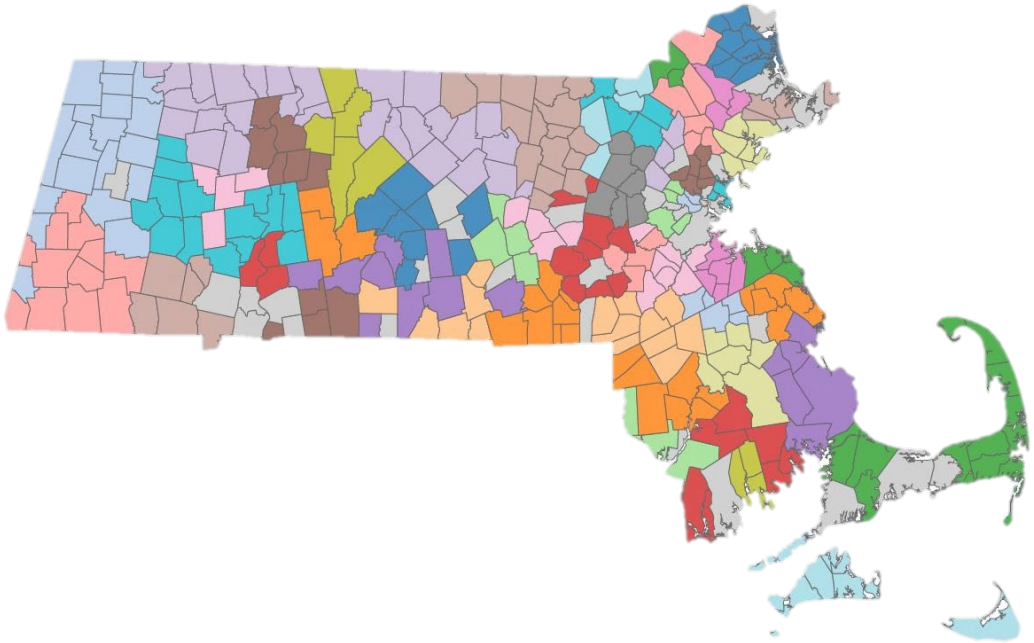


Public Health Excellence (PHE) Shared Services Grant Program

Public Health Excellence (PHE) Program Objectives

- A grant opportunity available to local and regional public health departments through their boards of health.
- Primary purpose of the grant is to **promote and expand** the sharing of public health service(s) in alignment with the Special Commission on Local and Regional Public Health's recommendations for improved effectiveness, efficiency, and equity of local and regional public health.
- Of Massachusetts's 351 individual municipal public health departments/boards of health, 320 are currently participating in 51 Shared Service Arrangements (SSAs)
- FY25 funding for PHE program is $24 million. The program is level funding through FY27.

PHE Shared Service Arrangements (SSA)



51 Shared Service Arrangements statewide

https://www.mass.gov/doc/list-of-shared-service-arrangements-xlsx/download

Public Health Excellence (PHE) Shared Services Grant Program

The PHE Shared Services Grant Program allows Shared Service Arrangements to expand and improve public health services by:

Hiring new public health staff

Training existing staff

Purchasing supplies, software, and equipment

Shared Service Arrangements Benefits

By **pooling resources, functions, and expertise**, a Shared Service Arrangement can improve compliance with the Performance Standards and expand the public health services it offers residents.

Shared Service Arrangement have dedicated program coordinators.

Each SSA is unique. Local boards of health have a voice in deciding how funding is allocated, and which positions are created to support local needs.

SSA collaborate with DPH offices and partners to expand public health services. For example, some SSAs are working on expanding vaccine access.

*as of February 2024

Shared Service Arrangement Success Stories

- Greater Boroughs Partnership for Health shared staff (Shared Service Coordinator/Epidemiologist) supported local coalition work with schools and wrote the Drug Free Community Grant application. They were awarded a 5-year grant through the CDC that fully funds a Substance Use Prevention Coordinator who works with the schools to reduce youth substance use.

How can school nurses collaborate with SSAs?

Thank You

Questions?

Kristin Black
Director of Shared Services
Kristin.E.Black@mass.gov

Conclusion

MASSACHUSETTS SCHOOL NURSE
CONSULTATION PROGRAM