Massachusetts Department of Public Health
Bureau of Infectious Disease and Laboratory Sciences

Adult Immunization Update

April 25, 2017
Susan M. Lett, MD, MPH
Medical Director, Immunization Program
MA Department of Public Health

Presenter Disclosure Information

We, Susan Lett and Rebecca Vanucci, have been asked to disclose any significant relationships with commercial entities that are either providing financial support for this program or whose products or services are mentioned during my presentations.

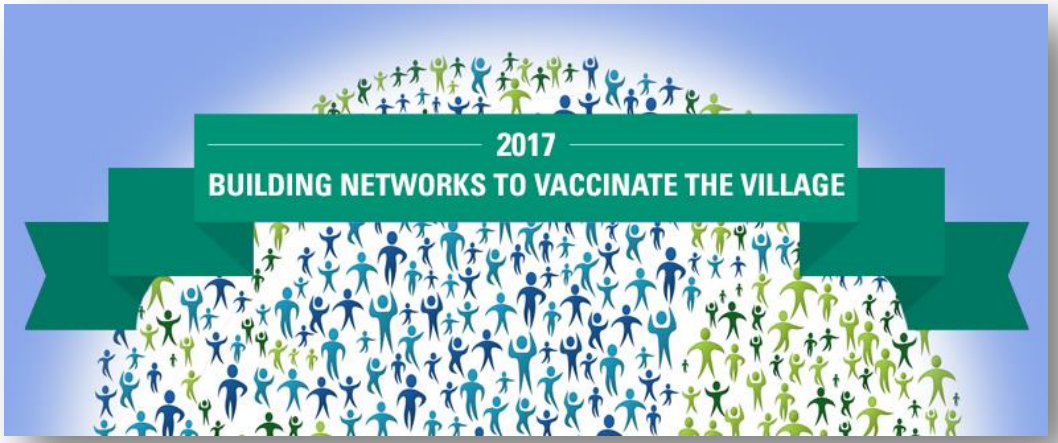
We have no relationships to disclose.

We will discuss the use of vaccines in a manner not approved by the U.S. Food and Drug Administration.

But in accordance with ACIP recommendations.

Outline

- Immunization Neighborhood in MA
- Recent Morbidity
- Adult Immunization Rates
- Special Initiatives
- MIIS



Immunization Neighborhood (Village)

Collaboration, **C**oordination, and **C**ommunication:

Among immunization stakeholders dedicated to meeting the immunization needs of the patient and protecting the community from vaccine-preventable diseases.

Adapted from :

American Pharmacists Association
Improving medication use. Advancing patient care.
APhA

Immunization Neighborhood (Village)

Where are You?

Strategy to Address Immunization Needs

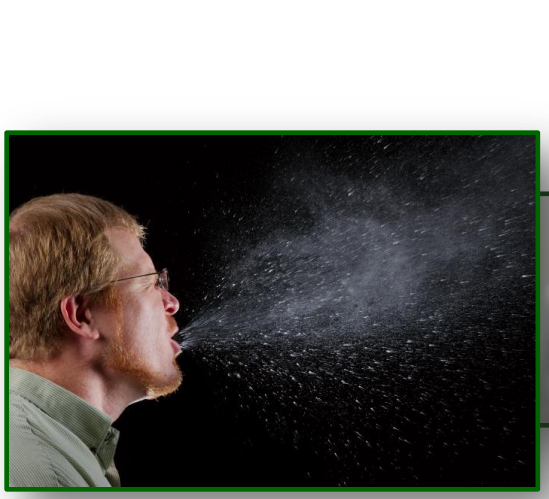
1. **Meeting specific needs of targeted populations**
2. **Supporting the Neighborhood**
   - HIT
   - Documentation
   - Standards / Guidelines
   - Consistent Messaging
   - Scope of Authority
   - Referral mechanisms

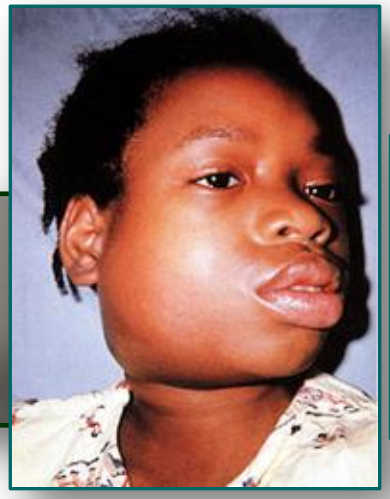
Adapted from :

American Pharmacists Association
Improving medication use. Advancing patient care.
APhA

Recent Morbidity

- Flu
- Mumps
- Meningitis
- Congenital Rubella Syndrome (CRS)

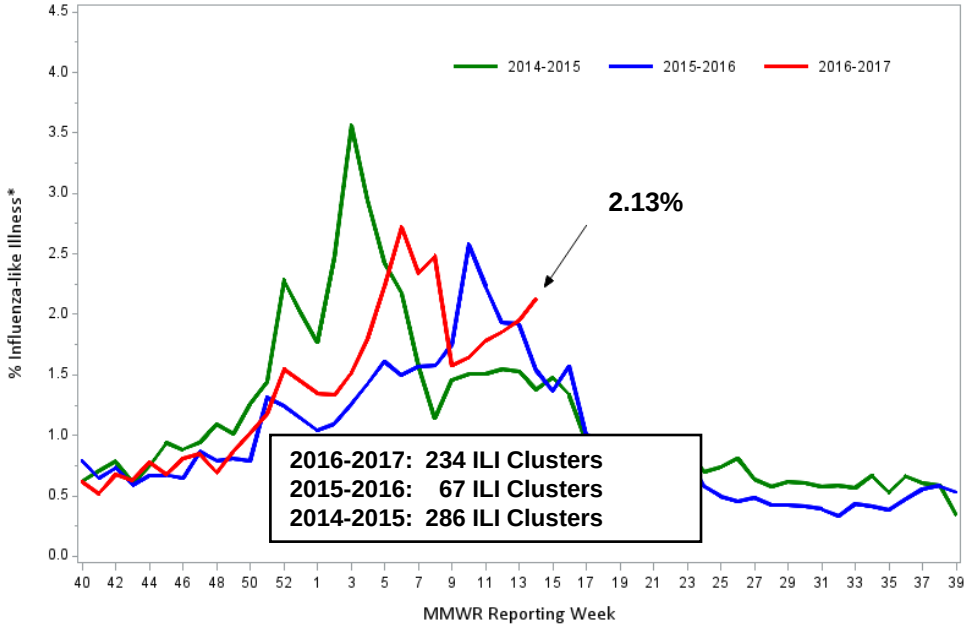





2016-2017 Influenza Season
National Summary

- Relatively moderate season
- Peak in February
- Influenza A (H3N2) predominated worldwide
  - 2nd peak in MA with B strain
- Circulating strains appeared to be a good match with the vaccine
- Vaccine Efficacy Overall: 48%
  - 43% A(H3N2)
  - 73 %: B viruses
- Preliminary vaccine coverage for children was 50% by end of Dec (similar to last year)
- Early presumptive treatment with antivirals for the high risk.

MA Influenza-like Illness (ILI) as of 4/14/2017



*Influenza-like illness (ILI, defined by fever >100F and cough and/or sore throat),as reported by Massachusetts sentinel surveillance sites

Not too late to get vaccinated!

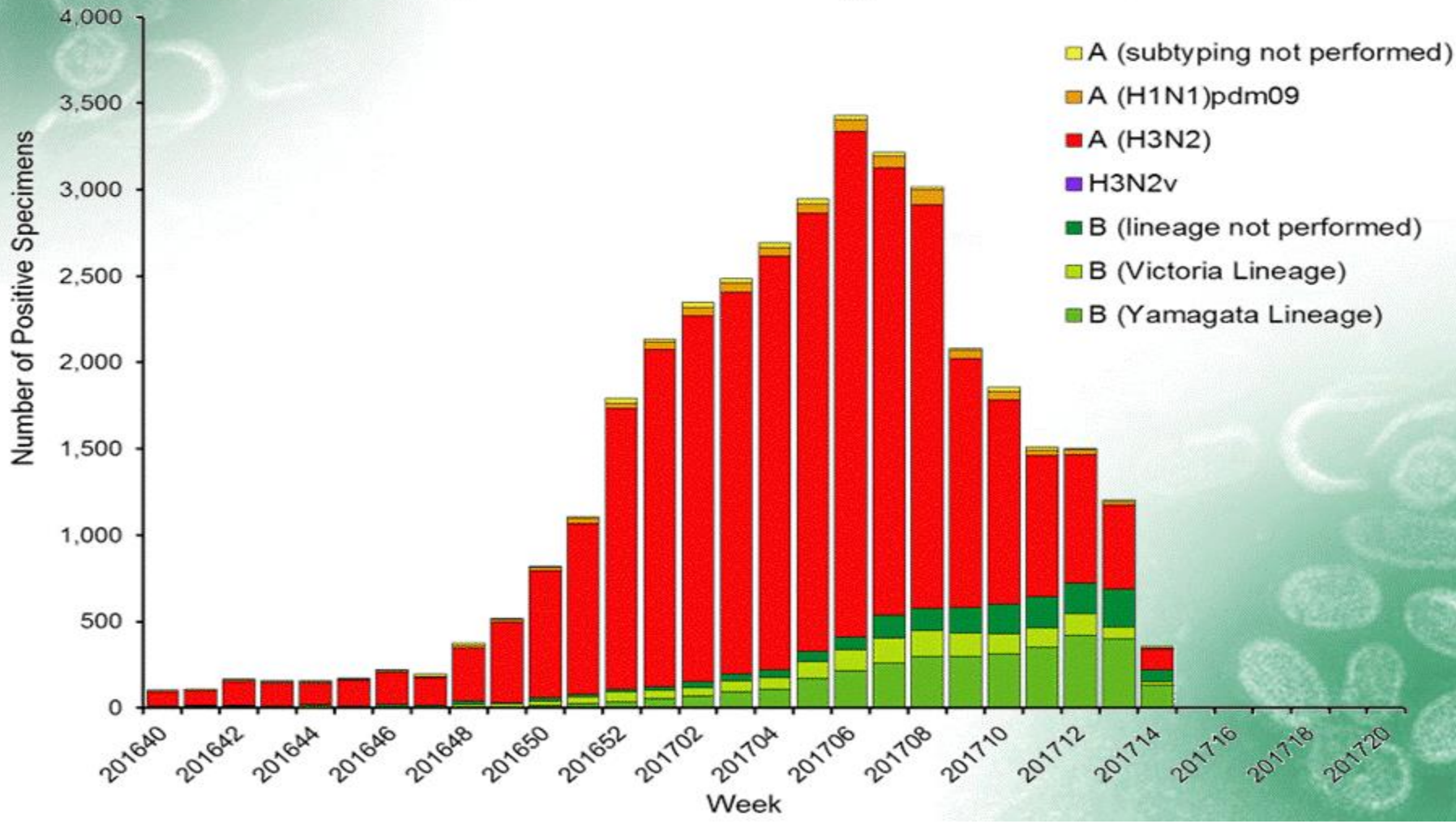
MMWR 2017;66:159-166, 167-171.

www.cdc.gov/flu

FLUVIEW

A Weekly Influenza Surveillance Report Prepared by the Influenza Division

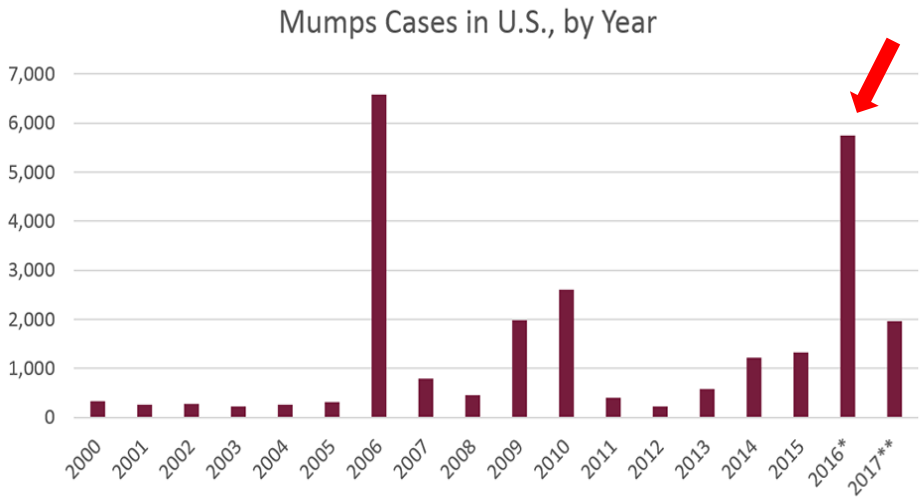
Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, 2016-2017 Season

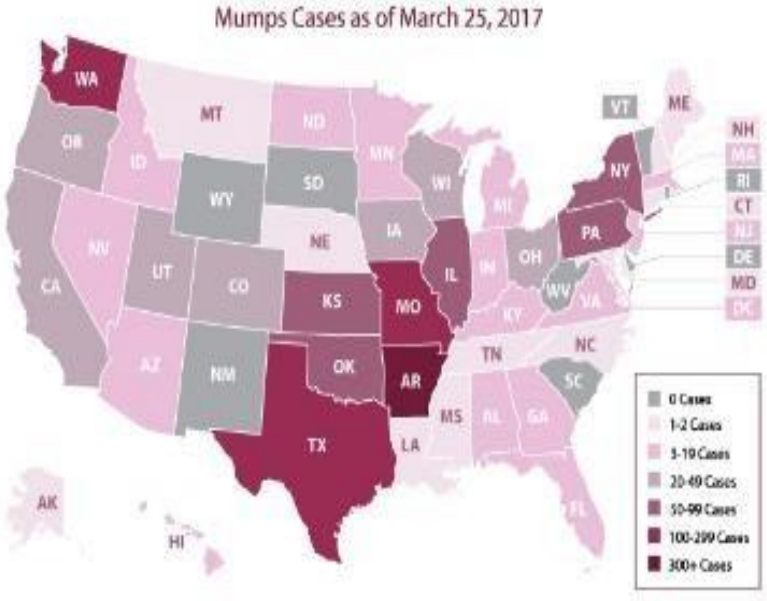


www.cdc.gov/flu

Mumps Cases and Outbreaks, United States

- Increase in the number of reported cases and outbreaks
  - Genotype G
- In 2016, close to 6,000 cases, highest in past 10 years
- In recent years outbreaks largely confined to universities and other **close contact settings**, including teams, schools, prisons and the Marshallese community
- Large number have 2 doses MMR
- Median age 20-21 years
- Little spread outside the affected communities to the general population





(Adapted from M. Marin ACIP Meeting 2-13-17 and C. Bridges. CDC Burden Dis Adults webinar 4-12-17)

Factors that May Contribute to the Increasing Number of Mumps Outbreaks (1)

- Up to 1/3 of mumps cases may be asymptomatic or have minimal symptoms
- Vaccine effectiveness
  - 1 dose: ~77% (49%-91%)
  - 2 doses: ~88% (66%-95%)
- Waning of vaccine-induced immunity
  - Serologic studies suggest waning: seropositivity and neutralizing antibody titers decline over time[1-5],
    - No established correlates of protection, implications of declining titer uncertain[3]
    - Cellular immunity declines less than seropositivity over time (if at all)[6]
  - Epidemiologic studies suggest waning: decreased vaccine effectiveness[7] and increased odds of disease with time since vaccination[8,9], evidence still limited
  - Waning of immunity does not explain the general geographical focal nature and that the oldest vaccinated cohorts not always most affected

(Adapted from M. Marin ACIP Meeting 2-13-17)

[1]Davidkin I et al. *J Infect Dis* 2008; [2]LeBaron CW et al. *J Infect Dis* 2009; [3]Rubin SA et al. *J Infect Dis* 2008; [4] Date AA et al. *J Infect Dis* 2008; [5]Kontio, *J Infect Dis* 2012; [6]Jokinen S et al. *J Infect Dis* 2007; [7]Cohen C et al. *Emerg Infect Dis* 2007; [8]Cortese MM et al. *Clin Infect Dis* 2008; [9]Vygen S et al. Euro Surveill 2016

Factors that May Contribute to the Increasing Number of Mumps Outbreaks (2)

- Force of infection (Intense exposure setting)
  - Outbreaks in settings with high population density and contact rates that facilitate transmission (e.g., college campuses, close knit communities)
- Vaccine-induced immunity less effective against other strains?
  - **NO** evidence to date, sera from vaccinated children neutralized diverse mumps strains[1,2]
  - Antigenic differences among mumps virus strains detected[1-3]
    - Lower antibody levels against non-vaccine strains
    - Might become more important with increasing time since vaccination

Summary

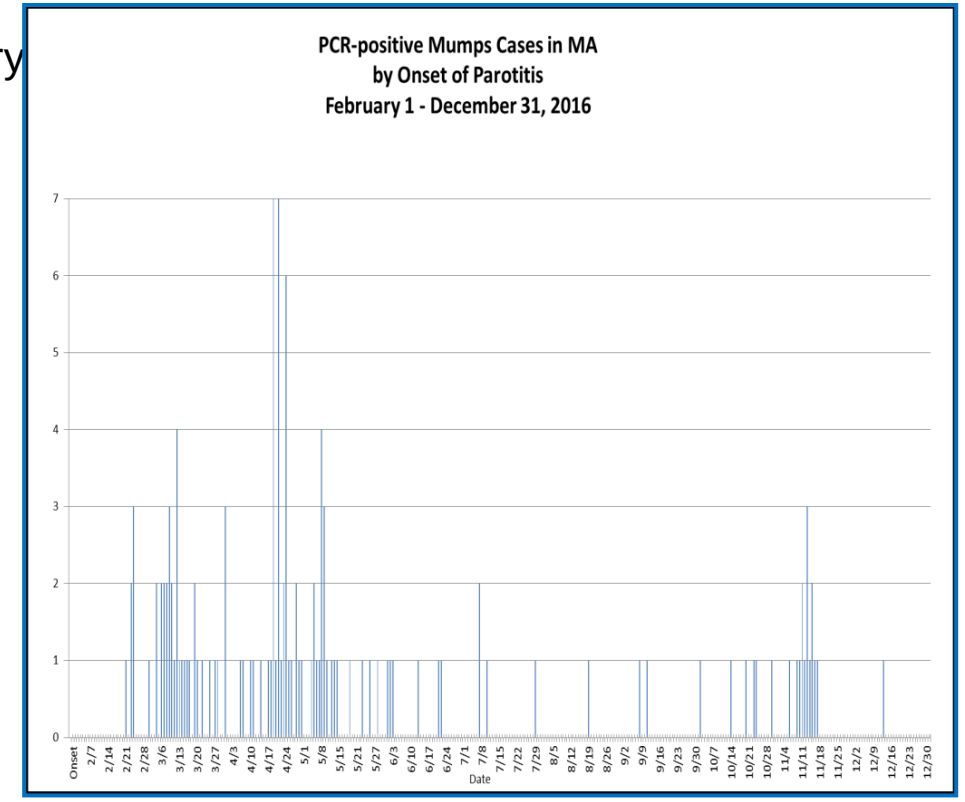
- Current 2-dose schedule sufficient for control in the general population
- Benefit of the 3rd dose needs to be re-assessed
- New ACIP working group formed to look at data

(Adapted from M. Marin ACIP Meeting 2-13-17)

[1]Rubin SA et al. *J Infect Dis* 2008; [2]Rubin SA et al. *J Virol* 2012; [3]Orvell C et al. *J Gen Virol* 2002

Mumps in MA 2016

- Largest mumps outbreak in MA in 30+ years
  - 789 total investigations from January – December 2016
  - 253 confirmed or probable cases
  - Age range 1-69 years (median 21 years)
- Largely contained within university settings (10 in metro Boston) with 55% at Harvard
- Little spread into surrounding communities
- Transmission interrupted due to:
  - Enforcement of existing school requirements for immunization
  - Implementation of control measures, particularly **early isolation of suspect cases**, even when diagnostic tests negative and other social distancing



University-associated Confirmed Cases
80% associated with colleges/universities
20% no clear connection to colleges identified

Invasive Meningococcal Disease Outbreak

- Five cases in two months starting in late January 2016 among people experiencing homelessness in greater Boston (6th case retrospectively linked) with 2 deaths
- Three serogroup C; three serogroup Y (matching molecular profiles) – serogroups are included in the quadrivalent meningococcal vaccine
- Very cold winter and very unusual outbreak
- Boston Health Care for the Homeless Program (BHCHP) and Boston Health Commission (BPHC) and CDC
  - performed contact investigations
  - developed education and awareness campaign
  - provided antibiotic chemoprophylaxis to about 280 contacts
  - Mass vaccination campaign administered ≈ 4,800 doses of MenACWY vaccine to homeless adults in Boston and surrounding areas (majority administered by BHCHP)


Menu | Metro | Breaking: US adds just 98,000 jobs in March

CDC in Boston to investigate illnes

By Felice J. Freyer | GLOBE STAFF MARCH 16, 2016


Vaccine rushed to Boston's homeless after a death

By Felice J. Freyer | GLOBE STAFF FEBRUARY 20, 2016

Top 10 Trending Articles

Most Viewed | Most Commented | Most

Silent protest by Bill Belichick at NF owners meetings?

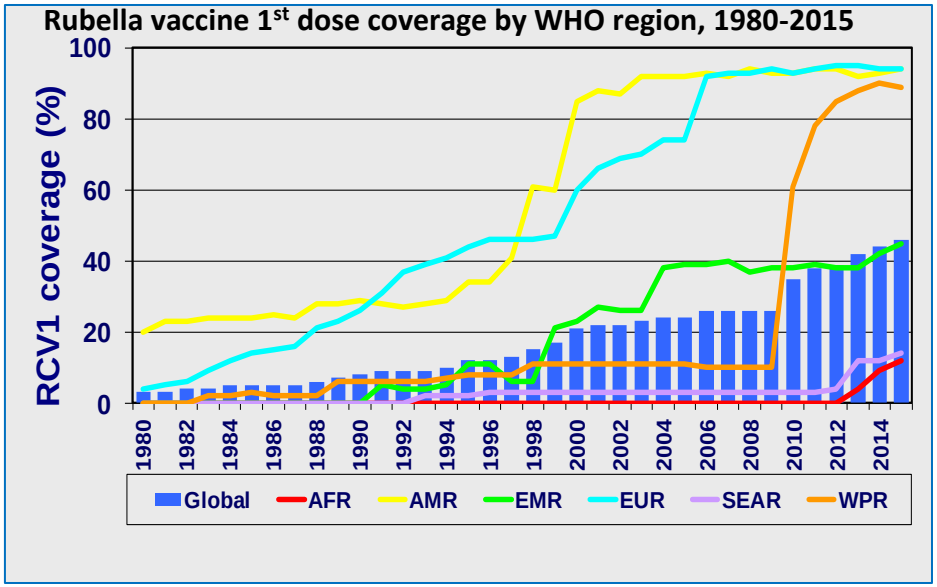
HubSpot book is unflattering portra

Boston health officials are vaccinating hundreds of homeless people against

BOSTON HEALTH CARE *for the* HOMELESS PROGRAM

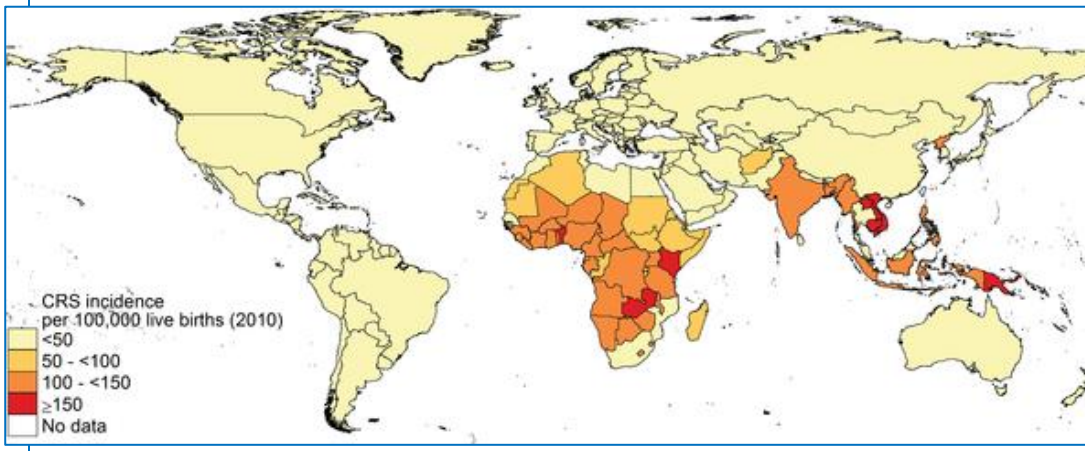
CRS In the U.S. and Worldwide

- More than **100,000** children are born every year with CRS, mainly in Africa, South-East Asia, and the Western Pacific.
  - Rubella vaccine coverage in Africa only about 10%
  - CRS incidence in Africa is estimated to be 100 to < 150 per 100,000 live births in over 20 countries
- Rare in U.S., 41 cases of CRS reported from 1998 – 2016 (18 year period). 88% of mothers were born outside the US.
- 2017 in MA, CRS in an infant born to a mother from Africa (first case in over 20 years):
  - One U.S. prenatal visit prior to delivery at 24 weeks
  - Mother tested for rubella immunity and had a very high positive IgG. Mostly likely had rubella in first trimester
  - Full term infant born at an out-lying hospital with cataracts, hearing loss, hepatosplenomegaly, thrombocytopenia, hypoglycemia, petechiae on face, metaphyseal lucencies
  - Infants can remain infectious for 1 year or longer



CRS: Estimates of the median incidence of CRS per 100,000 live births by country

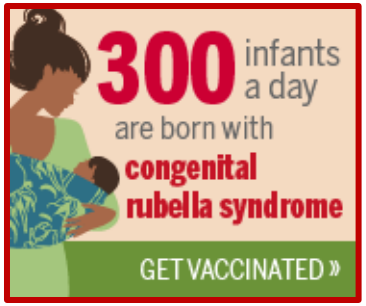
2010



Source of graphs: Gavin Grant ACIP Meeting 2-22-17

Recommendations to Prevent Rubella and CRS

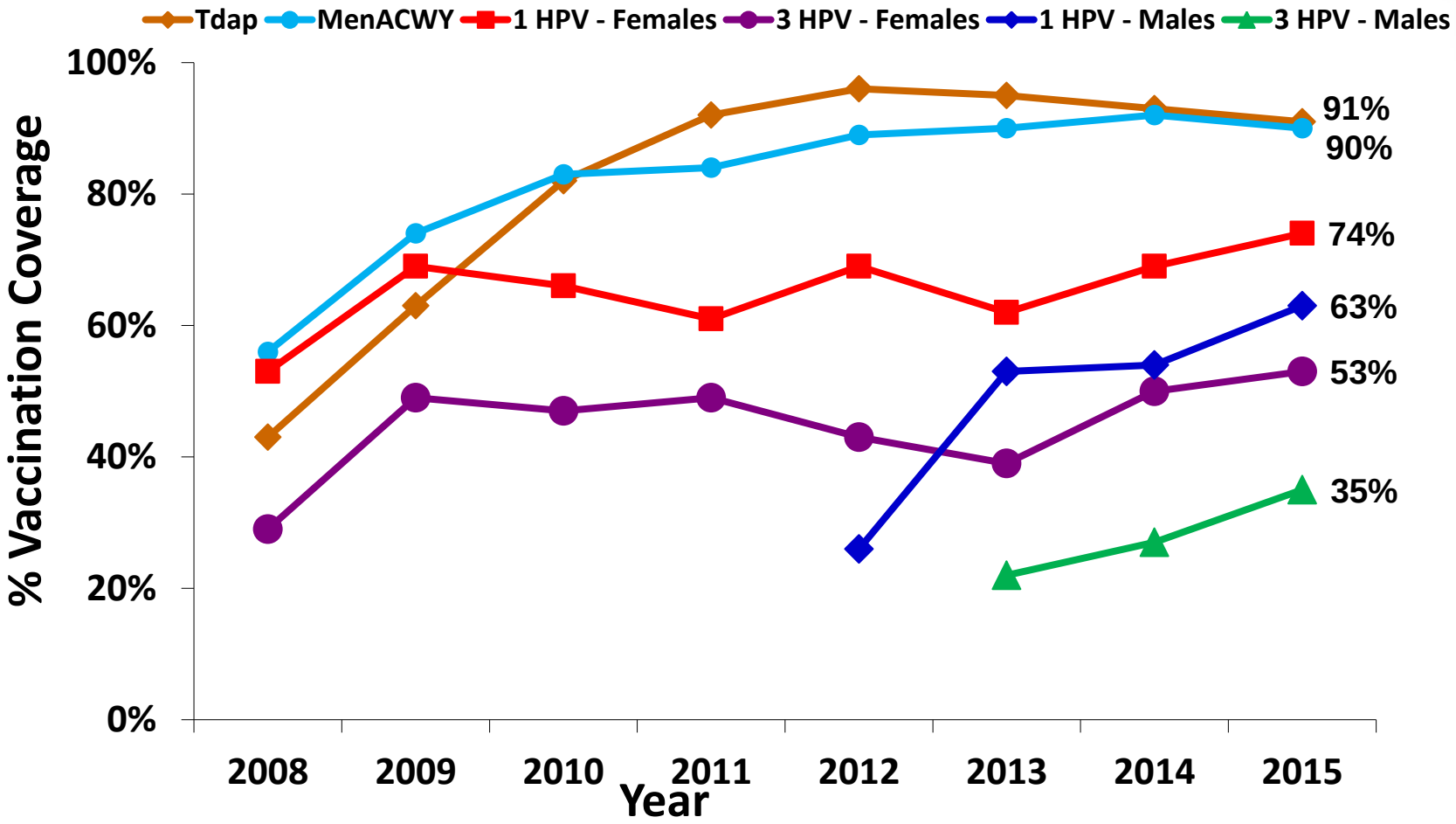
- Immunity to rubella should be documented in **all** pregnant women.
  - Particularly in recent U.S. arrivals and foreign-born
- If not immune, or in doubt, vaccinate.
  - Before pregnancy
  - Or before discharge after delivery
  - Or at the first post-partum visit
- High index of suspicion with recent arrivals to U.S. who were born outside of U.S.
  - Ask about rash illness and exposure to rash illness during pregnancy
- Consider CRS in infants with symptoms consistent with CRS, especially in foreign-born or recently-arrived mothers, and place on contact precautions.
- <u>Infection Control is Critical:</u> Infants can shed the virus for prolonged periods (up to 1 year of age or longer)



Immunization Rates

Adolescent Vaccination Coverage, Massachusetts, 2008 – 2015

CDC Award



Note: For the purposes of comparability to 2014 estimates, 2013 estimates were revised by retrospectively applying the revised 2014 provider data definition to the 2013 NIS teen data and as a result, differ from those previously published.

NIS Data, CDC

HPV YOU ARE THE KEY TO CANCER PREVENTION

Estimated Vaccination Coverage with HPV Among Adolescents 13-17 Years of Age, MA, NIS 2014 vs 2015

	Females		Males	
	2014	2015	2014	2015
1+ HPV	69%	74% (+5%)	54%	63% (+9%)
2+ HPV	63%	63% (+0%)	46%	51% (+5%)
3+ HPV	50%	53% (+3%)	27%	35% (+8%)
HPV 3 dose series completion*	74%	81% (+7%)	64%	64% (+0%)

*Percent who received 3 doses among those had at least 1 dose of HPV and at least 24 weeks between first dose and interview date.

NIS Data, CDC

MA Flu Vaccination Rates

CDC Award

	MA 2014-15	MA 2015-16	US 2015-16
Everyone 6 mos+	55%	50%	46%
Children 6 mos – 17 yrs	76%	#2 75%	59%
○ Children 6 mos – 4 yrs	81%	#3 85%	70%
○ Children 5 – 12 yrs	78%	#2 79%	62%
○ Adolescents 13 – 17 yrs	71%	63%	47%
Adults 18 +	50%	44%*	42%
○ Adults 18 – 64 y/o	45%	40%	36%
○ Adults HR 18 – 64 y/o	53%	48%	46%
○ Adults 50 – 64 y/o	53%	46%	44%
○ Adults 65+	67%	60%*	63%

2015-16 National Immunization Survey (NIS) and Behavioral Risk Factor Surveillance System (BRFSS)

*Statistically significant

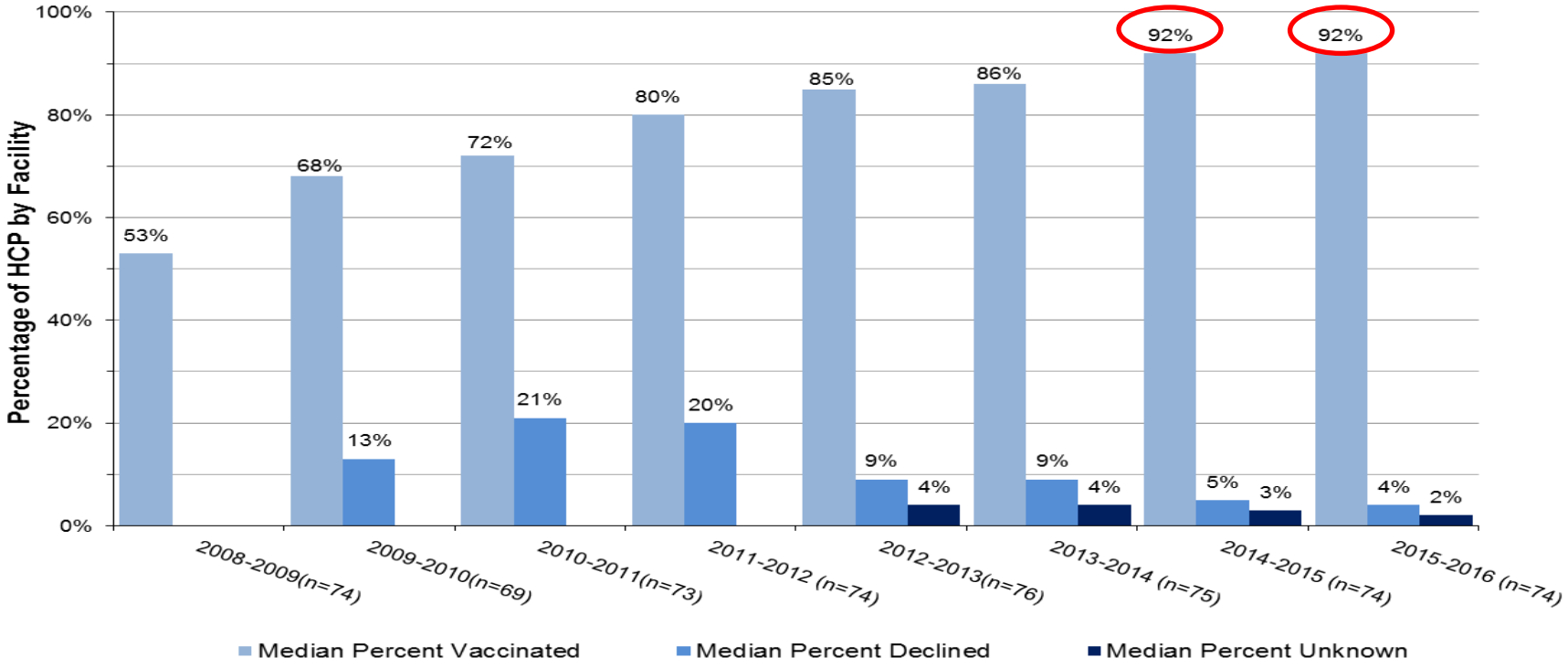
MA Adult Vaccination Rates

Vaccine/Group	2013	2014	2015	US 2015
Tdap ≥18 y/o	37%	41%	35%	23%†
Zoster ≥60 y/o	30%	39%	44%	31%
HPV females 18-26 y/o (1+ doses)	61%	64%	71%	42%§
HPV females 18-26 y/o (3+ doses)	76%*	79%*	78%*	70%*
HPV males 18-26 y/o (1+ doses)	23%	38%	38%	10%§
HPV males 18-26 y/o (3+ doses)	30%*	N/A	47%*	43%*
Influenza vaccine ≥65 y/o	66%	58%	61%	N/A
Pneumococcal vaccine ≥65 y/o	70%	72%	73%	64%

*Percent of those who received at least 1 dose.
†US NHIS data for Tdap is for adults ≥19 years old.
§US NHIS data for HPV (at least 1 dose) is for adults 19-26 years old.

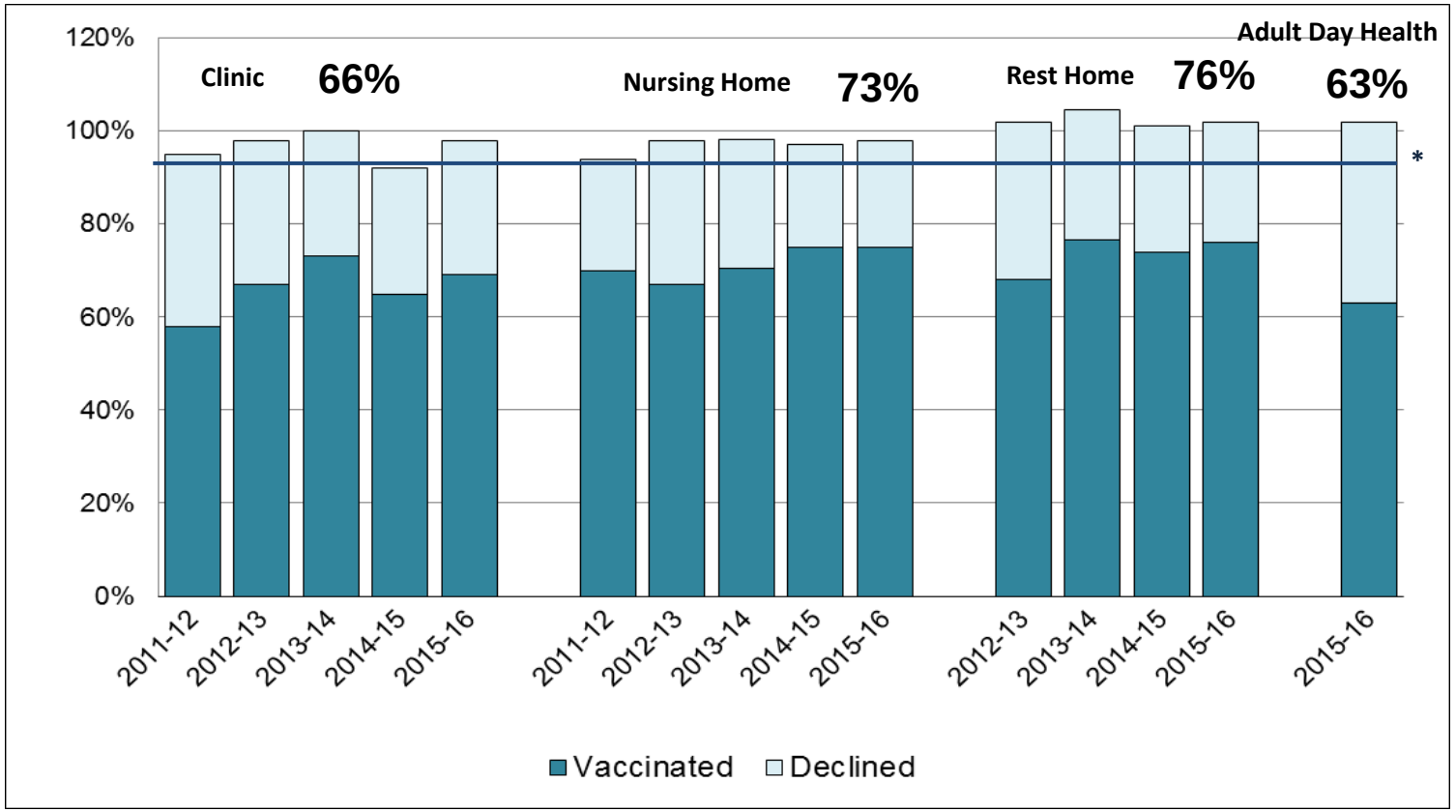
Source: MA Data: MA BRFSS, US Data: NHIS

Influenza Vaccination Rates
Acute Care Hospitals, MA
Trends Over Time



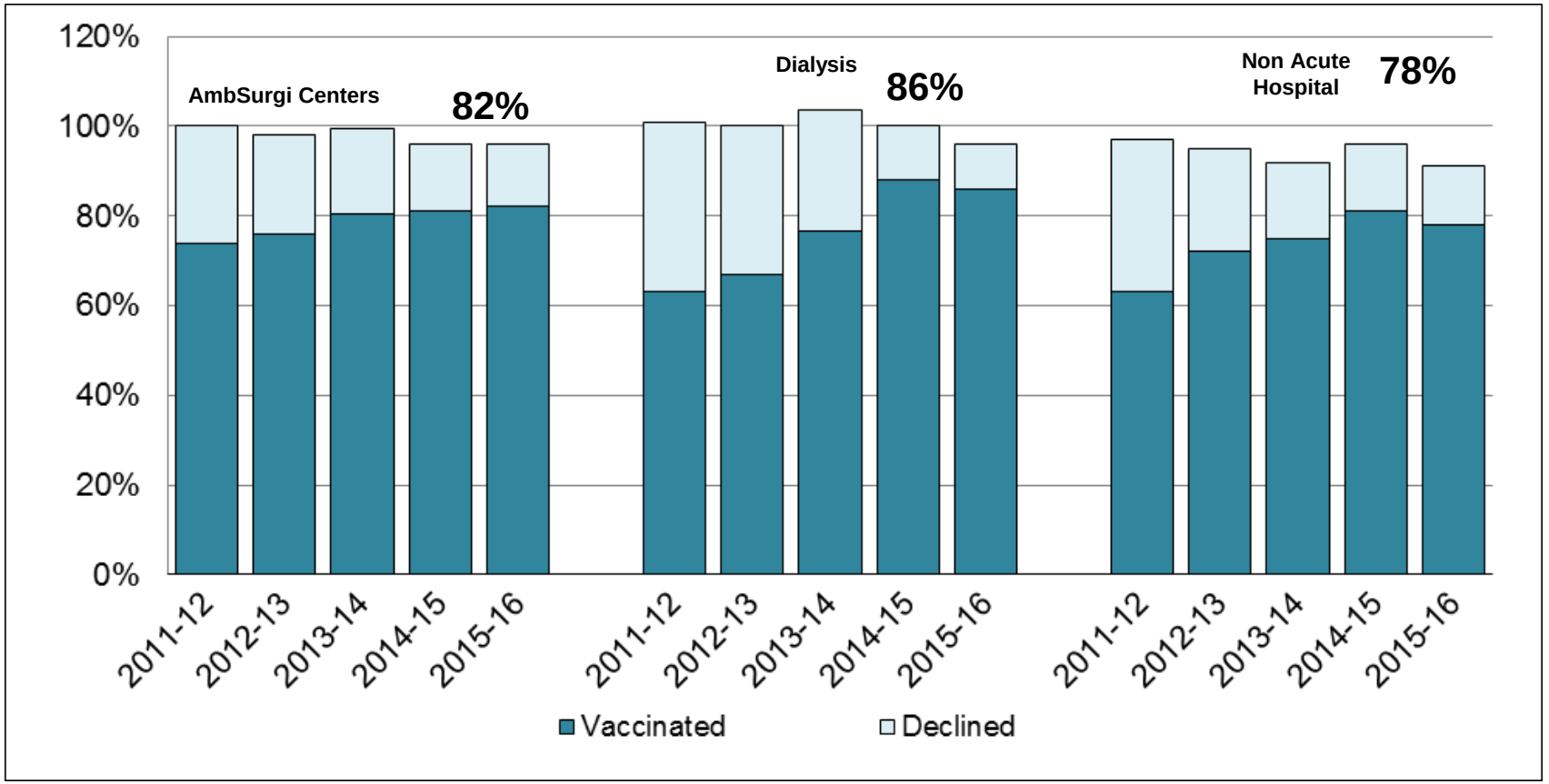
Median HCP vaccine coverage remained steady in 2015-16 and met the Healthy People 2020 benchmark of 90%. The median declination rate decreased to 4% in 2015-16. This reporting year shows a continued decrease in median declination and unknown categories since data collection began in the 2008-09 season.

Mean Percent of HCP Influenza Vaccinations and Declinations as Reported by Massachusetts Clinics, Nursing Homes, Rest Homes and Adult Day Health Programs: 2011-2016 Seasons

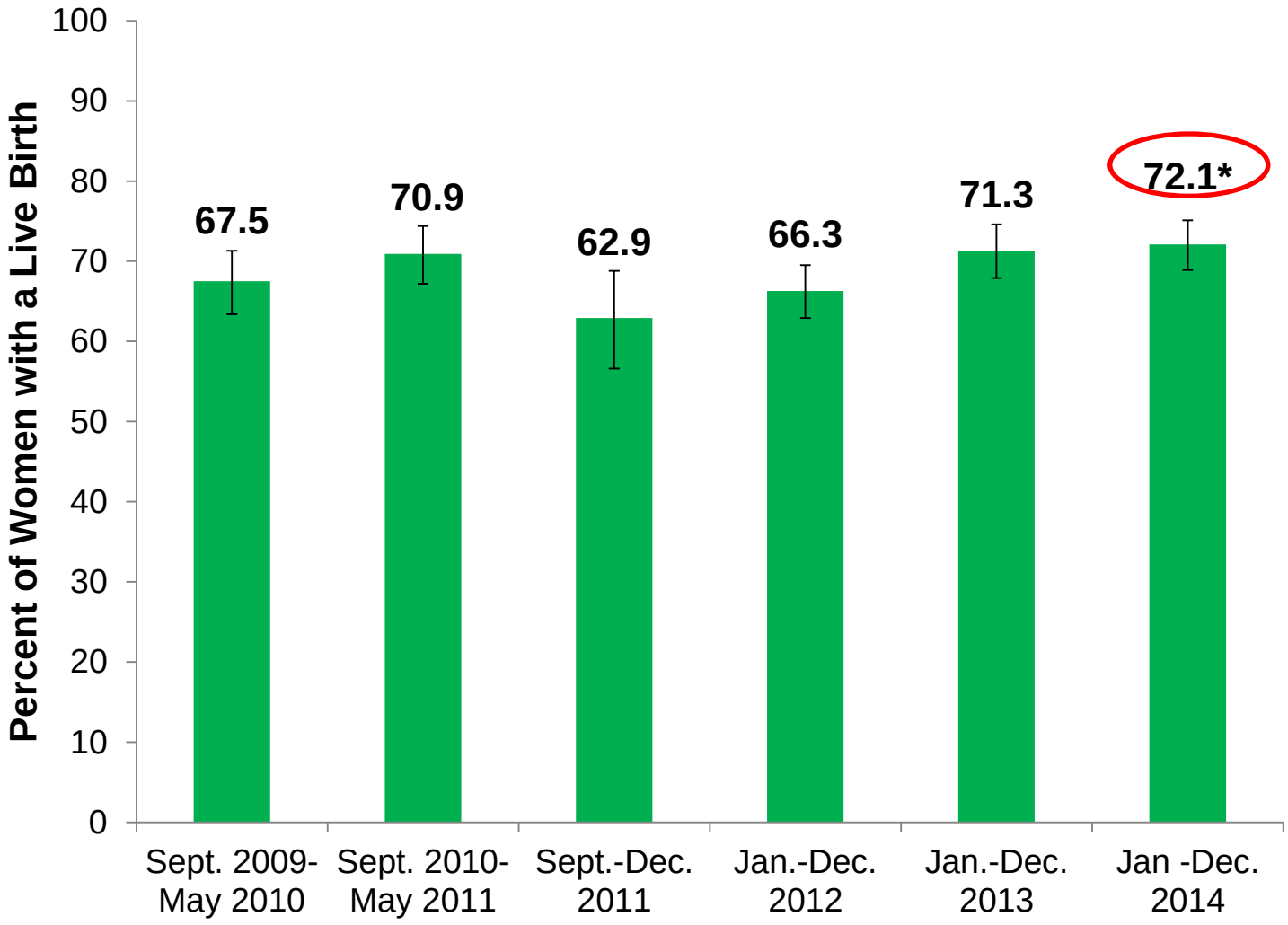


* 2015-2016 Season was the first year Adult Day Health Programs were required to report.

Mean Percent of HCP Influenza Vaccination and Declination Rates for Ambulatory Surgical Centers, Dialysis Centers and Non-Acute Hospitals: 2011-2016 Influenza Season



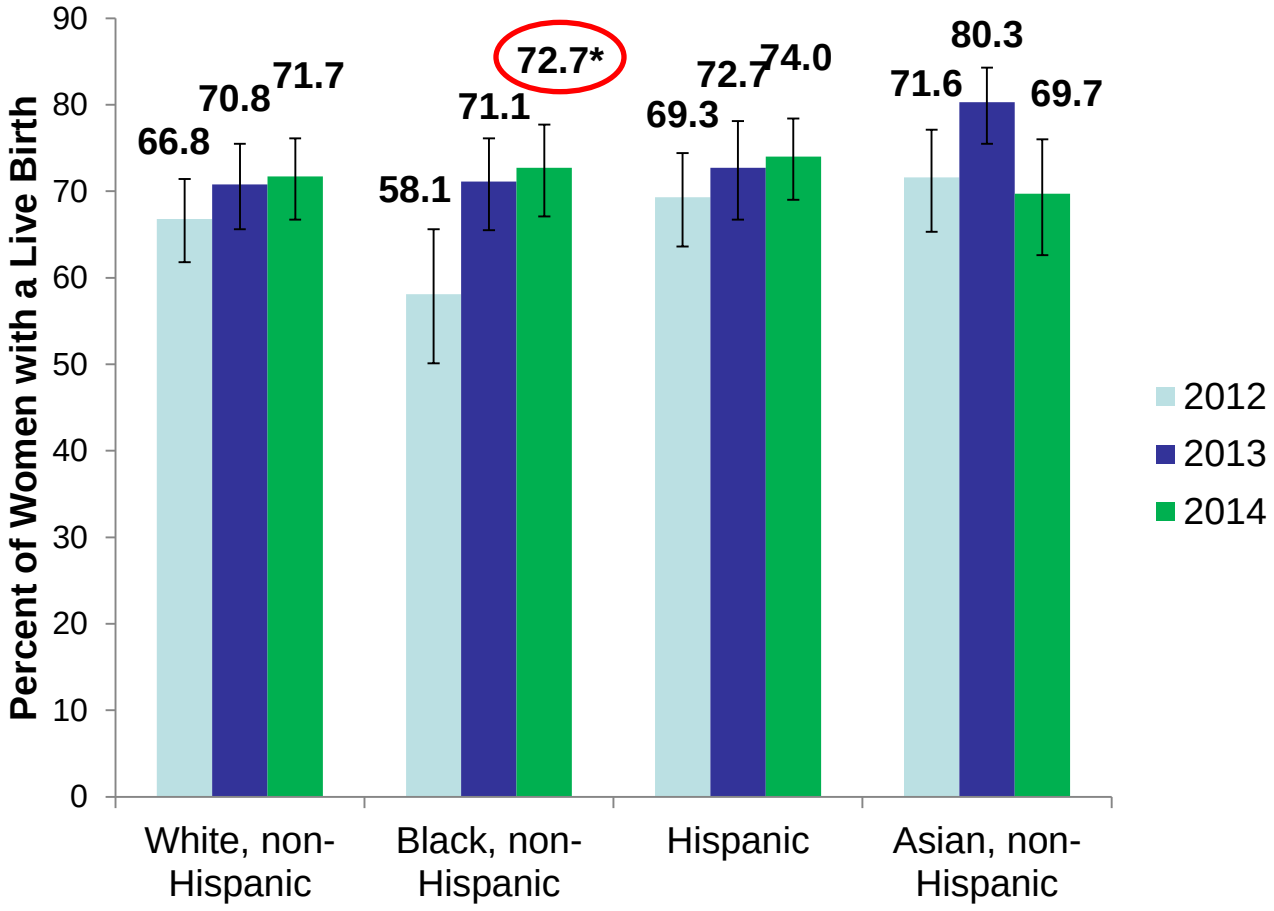
Influenza Vaccination Pregnant Women, PRAMS, MA 2009-2014



PRAMS Massachusetts

* Linear trend statistically significant (p-value =0.0126)

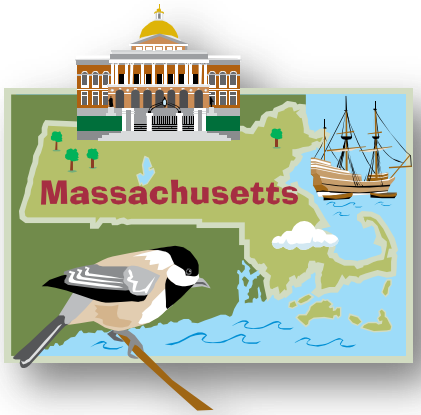
Influenza Vaccination Pregnant Women by Race/ Hispanic Ethnicity, PRAMS, MA 2012-2014

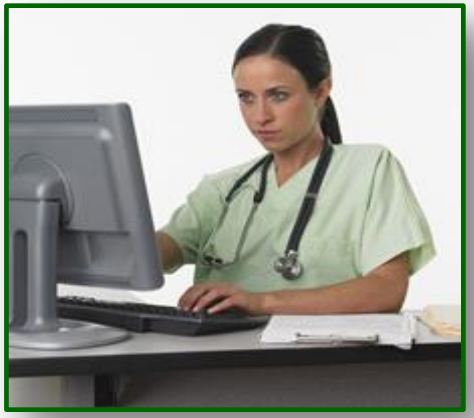


PRAMS Massachusetts

* Statistically significant (p-value = 0.0024)

Special Initiatives

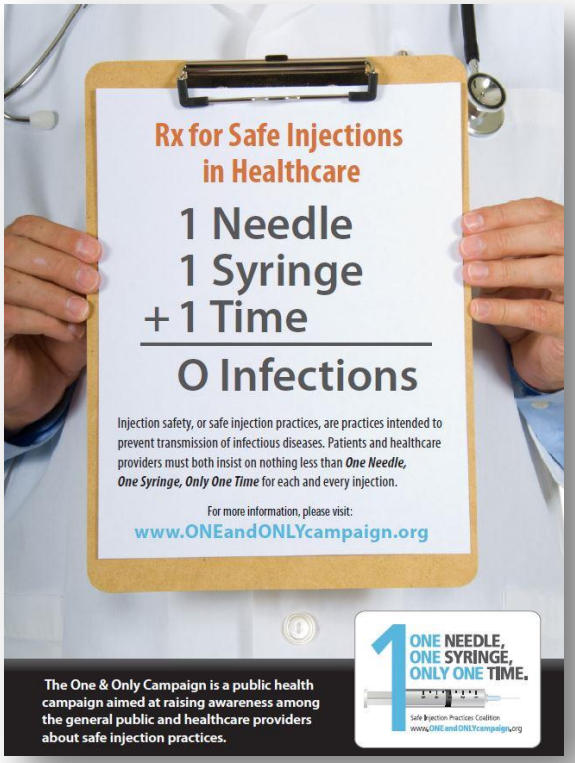




Vaccine Administration Best Practices

- CDC and MDPH Resources

One & Only Campaign: Injection Safety Guidelines



- Follow proper infection control practices and maintain aseptic technique during the preparation and administration of injected medications
- Never administer medications from the same syringe to more than one patient, even if the needle is changed
- Never enter a vial with a used syringe or needle
- Do not use medications packaged as a single-dose or single-use for more than one patient
- Whenever possible and appropriate, limit use of multi-dose vials

CDC &Safe Injection Practices Coalition
http://www.cdc.gov/injectionsafety/1anOnly.html

CDC At-A-Glance Resource Guide

- Immunization service providers and business retaining their services should ensure staff adhere to CDC guidelines.
- Guide includes links to info about:
  - Infection prevention
  - Vaccine administration & safety
    - ACIP Gen Imm Recs
    - Large Scale Clinic Guidance
    - Skills checklists
  - Standing Orders
  - Vaccine storage and handling practices
  - Reporting to:
    - VAERs
    - Institute for Safe Medication Practices (ISMP)
  - VPD epidemiology

AT-A-GLANCE RESOURCE GUIDE

VACCINE ADMINISTRATION AND STORAGE AND HANDLING

IMMUNIZATION AND VACCINES (GENERAL)

General Recommendations on Immunization – Recommendations of the Advisory Committee on Immunization Practices (ACIP)
Guidance about vaccination and vaccines for health care providers.
www.cdc.gov/mmwr/preview/mmwrhtml/rr6002a1.htm

Epidemiology and Prevention of Vaccine-Preventable Diseases (the Pink Book), 13th Edition: Course Textbook (2015)
Comprehensive information on routinely used vaccines and the diseases they prevent.
www.cdc.gov/vaccines/pubs/pinkbook/index.html

The Pink Book Webinar Series
One-hour webinars with CDC experts exploring chapters of the Pink Book.
www.cdc.gov/vaccines/ed/webinar-epv/index.html

"You Call the Shots" Online Training Modules
A series of training modules for health care providers on vaccine recommendations with self-tests to assess learning. CE credit available.
www.cdc.gov/vaccines/ed/youcalltheshots.html

Vaccine Safety
Safety information about specific vaccines and answers to commonly asked questions.
www.cdc.gov/vaccinesafety/index.html

Vaccine Information Statements (VIS)
Statements required by law to inform patients about the benefits and risks of a vaccine they are receiving.
www.cdc.gov/vaccines/hcp/vis/

VACCINE STORAGE AND HANDLING

- **Epidemiology and Prevention of Vaccine-Preventable Diseases (the Pink Book): Storage and Handling Chapter**
  www.cdc.gov/vaccines/pubs/pinkbook/vac-storage.html
- **Vaccine Storage and Handling Guidelines and Recommendations**
  Resources on vaccine storage and handling recommendations and guidelines.
  www.cdc.gov/vaccines/recs/storage/default.htm
- **Vaccine Storage and Handling Toolkit**
  Comprehensive guidance for health care providers on vaccine storage and handling recommendations and best practices.
  www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf
- **"Keys to Storing and Handling Your Vaccine Supply" Training Video**
  This training outlines vaccine storage and handling best practices, and provides helpful tips for preventing errors and preserving vaccine supply and integrity.
  www2.cdc.gov/vaccines/ed/shvideo/

VACCINE ADMINISTRATION

- **Skills Checklist for Immunization**
  A self-assessment tool from the Immunization Action Coalition for health care staff who administer vaccines.
  www.immunize.org/catg.d/p7010.pdf
- **Epidemiology and Prevention of Vaccine-Preventable Diseases (the Pink Book): Vaccine Administration Chapter**
  www.cdc.gov/vaccines/pubs/pinkbook/vac-admin.html
- **Vaccine Administration Guidelines and Recommendations**
  CDC resources include information on vaccine dosage, route, and site; vaccines with diluents; sample vaccine records; recommendations for emergency situations; managing vaccine reactions; and vaccine indications.
  www.cdc.gov/vaccines/recs/vac-admin/default.htm
- **Injection Safety**
  Information for health care providers about safe injection practices.
  www.cdc.gov/injectionsafety/providers.html
- **Using Standing Orders for Administering Vaccines: What You Should Know**
  The Immunization Action Coalition provides standing orders for ACIP-recommended vaccines and an overview about the use of standing orders for vaccination.
  www.immunize.org/standing-orders/

June 22, 2016
CS249275-K

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

https://www.cdc.gov/vaccines/hcp/admin/downloads/vacc-admin-storage-guide.pdf

National Adult and Influenza Immunization Summit

Checklist of Best Practices for Vaccination Clinics Held at Satellite, Temporary, or Off-site Locations

NAIIS Website:
https://www.izsummitpartners.org/

OVERVIEW OF THIS DO

This checklist is a step-b
satellite, temporary, or
best practices for vaccir
This checklist outlines C
effectiveness. **A clinic c**
TIME a vaccination clin
should be kept on file b

INSTRUCTIONS

1. A staff member wh
(This individual is re
2. Review this checklis
the clinic will be hel
3. **Critical guidelines f**
check "NO" in ONE
your organization's
proceeding with th
move forward with
4. Contact your organi
transported, stored
information was pr
marked as "NO" on
5. This checklist shoul
www.cdc.gov/vacci
vaccines, consult th
6. **This checklist appli**
7. Sign and date the cl
(*If more than one cl*
complete only the s
8. Attach the staff sigr
supervisor was ove
accountability

BEFORE THE CLINIC (Please review and answer each row before the clinic starts.)

VACCINE SHIPMENT

YES	NO	N.A.	
☐	☐	■	Vaccine was shipped directly to the facility/clinic site, where adequate storage is available. (*Direct shipment is preferred for cold chain integrity.*)

VACCINE TRANSPORT (If it was not possible to ship vaccines directly to the facility/clinic site)

YES	NO	N.A.	
☐	☐ STOP	☐	**Vaccines were transported using a portable vaccine refrigerator or qualified container and pack-out** designed t transport vaccines within the temperature range recommended by the manufacturers (i.e., between 2-8° Celsius or 36-46° Fahrenheit for ALL refrigerated vaccines). *See page 55 of CDC's Vaccine and Storage and Handling Toolkit for definitions of qualified containers and pack-outs:* www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf.
☐	☐ STOP	☐	The person transporting the vaccines confirmed that manufacturer instructions for packing configuration and proper conditioning of coolants were followed. (*Your qualified container and pack-out should have come with packing instructions. If not, contact the company to obtain instructions on proper packing procedures.)*
☐	☐	☐	The person transporting the vaccines confirmed that all vaccines were transported in the passenger compartmen of vehicle (NOT in vehicle trunk).
☐	☐ STOP	☐	A digital data logger with a buffered probe (placed directly with vaccines) with a current and valid Certificate of Calibration Testing was used to monitor vaccine temperature during transport.
☐	☐	☐	The amount of vaccine transported was limited to the amount needed for the workday.

VACCINE STORAGE AND HANDLING (upon arrival at facility/clinic)

YES	NO	N.A.	
☐	☐ STOP	☐	If vaccines were shipped, the shipment arrived within the appropriate time frame (according to manufacturer or distributor guidelines) and in good condition.
☐	☐ STOP	☐	If vaccines were shipped, the cold chain monitor (CCM) was checked (if available) upon arrival at the facility/clinic, and there was no indication of a temperature excursion during transit. CCMs are stored in a

rectly

Checklist and Pledge can be found at:
https://www.izsummitpartners.org/naiis-workgroups/influenza-workgroup/off-site-clinic-resources/

MDPH Resources

Visit our MDPH Flu Website:
www.mass.gov/flu

Home > Provider > Guidelines & Resources > Guidelines for Services & Planning > Diseases & Conditions > Flu > Vaccine Guidelines and Tools

Vaccine Guidelines and Tools

Resources for Healthcare Professionals

- Seasonal Flu Vaccination Resources for Health Professionals (CDC)
  - CDC resource page with information about the current influenza season, dosage and adm composition, storage and handling, target groups for vaccination, supply and distribution, and patient education.
- Strategies for Increasing Adult Vaccination Rates (CDC)
  - CDC resource page highlighting strategies to increase adult vaccination rates including m recommendation, reminder systems, and how to improve coverage rates for high risk pop
- Flu Vaccine Safety Summary for Clinicians (CDC)
  - CDC summary of seasonal influenza safety resources including key facts and safety assc vaccine (IIV, LAIV, and RIV).

Planning Clinics and Campaigns

- Guidelines for Immunization Clinics
  - These guidelines were developed to assist in the planning and operation of vaccination cl clinics, school-based clinics, and vaccination clinic in response to small-scale emergencie summarizes key points in running a successful clinic, and provides links to many other us
- CDC Guidelines for Large-Scale Influenza Vaccination Clinic Planning
  - CDC resource page outlining the logistics and considerations needed to plan a high volu
- Flu Vaccine for Everyone: Reaching and Engaging Diverse Communities 3MB 7MB
  - This is a comprehensive guide to conducting influenza clinics for healthcare professionals and community based organizations to reach diverse populations

Click on “Information for Healthcare and Public Health Professionals”, then click on “Vaccine Guidelines and Tools” to find many resources and links, such as:

- Clinical Advisories
- Model Standing Order
- Planning Clinics and Campaigns
- **MDPH Guidelines for Immunization Clinics**

http://www.mass.gov/eohhs/docs/dph/cdc/immunization/clinic-guidelines.pdf

Publications

Flu Vaccine for Everyone 3MB

CDC Immunization Netconferences

Adult Series NetConference

- Wednesday, April 12 - Burden of Vaccine-preventable Diseases in Adults: Medical, Social, and Economic Costs
- Wednesday, April 19 - Provider Reimbursement for Adult Immunizations
- Wednesday, April 26 - Immunizing Adults: Immunization Schedule, Coverage, and Challenges
- Wednesday, May 17 - Immunizing Older Adults and the Chronically Ill
- Wednesday, May 24 - Immunizing Pregnant Women, Health Care Personnel, and in the Workplace
- Wednesday, May 31 - Clinic Logistics: Vaccine Administration, Storage, and Handling

"Best Practice" Tools for Holding Safe Vaccination Clinics in Temporary Settings: Checklist and Pledge 101

- **Date and Time:** May 2, 2017, 1pm-2pm Eastern
- **Moderator: Andrew Kroger, MD, MPH,** Medical Officer, National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention
- **Speakers:**
  - **Kara Anderson,** Director, Business Development, Passport Health
  - **Amy J Behrman, MD,** Medical Director, Occupational Medicine, Associate Professor, Perelman School of Medicine, University of Pennsylvania
  - **Amy Parker Fiebelkorn, MSN, MPH,** Epidemiologist, Deputy of the Vaccine Task Force
  - **Kelly McKenna, MA,** Manager, Immunization Initiative, EverThrive Illinois

Find both at: https://www.cdc.gov/vaccines/ed/ciinc/index.html

Standing Orders in MA

- Licensed registered and practical nurses can administer vaccines using standing orders (BORN Advisory Ruling No. 9804, updated 9-9-15) www.mass.gov/eohhs/gov/departments/dph/programs/hcq/dhpl/nursing/nursing-practice/advisory-rulings/administration-of-immunizing-agents.html

- Pharmacists (and interns under supervision of a pharmacist) can administer vaccines to adults using standing orders written by a physician (105 CMR 700.000)
  - New regs will allow vaccination down to 9 years of age

IAC model standing orders available at:

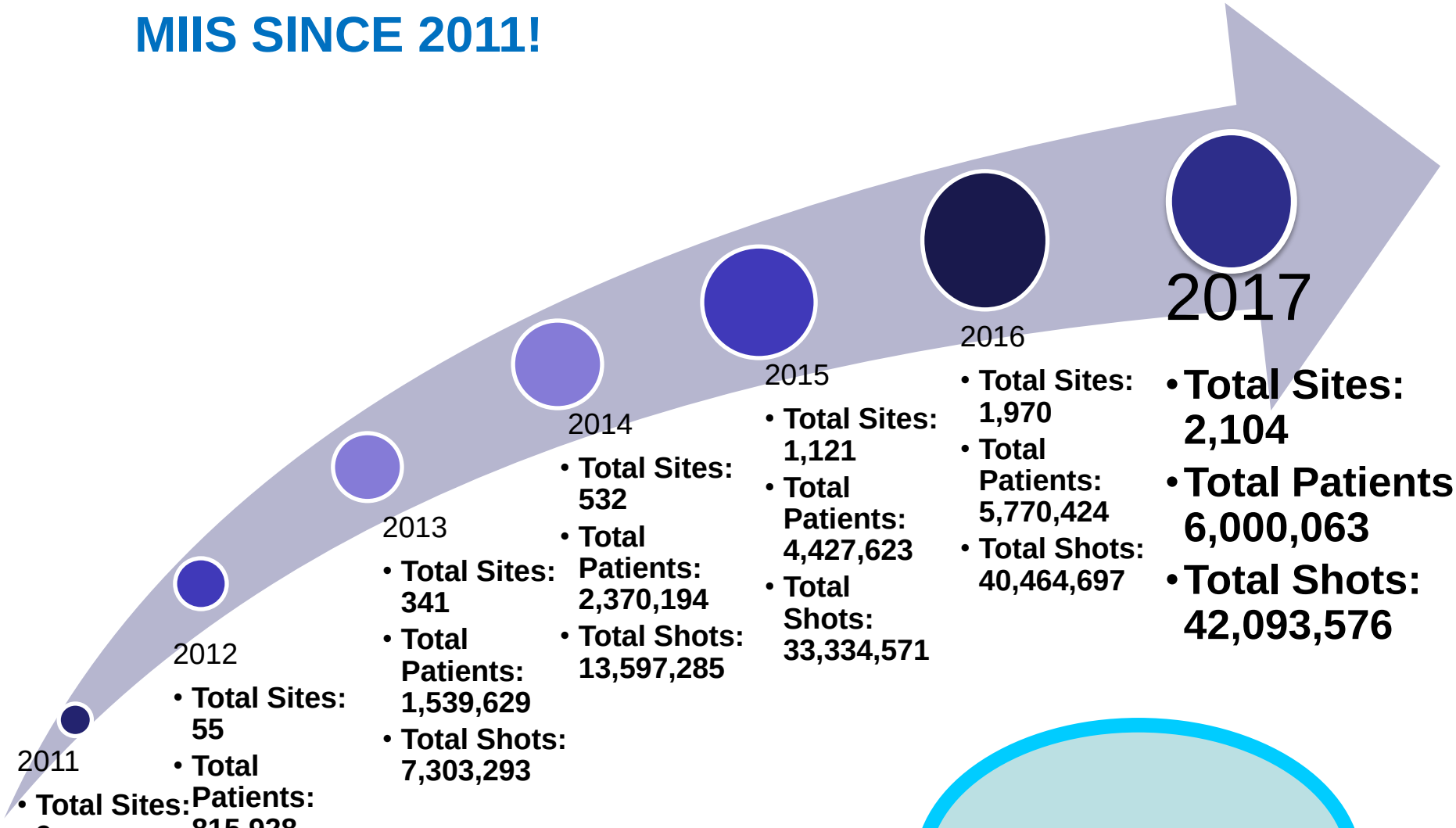
http://www.immunize.org/standing-orders/

MDPH model standing orders available at:

www.mass.gov/dph/imm

MIIS

RAPID EXPANSION OF THE MIIS SINCE 2011!



2011
- **Total Sites: 9**
- **Total Patients: 3,902**
- **Total Shots: 69,505**

2012
- **Total Sites: 55**
- **Total Patients: 815,928**
- **Total Shots: 3,371,434**

2013
- **Total Sites: 341**
- **Total Patients: 1,539,629**
- **Total Shots: 7,303,293**

2014
- **Total Sites: 532**
- **Total Patients: 2,370,194**
- **Total Shots: 13,597,285**

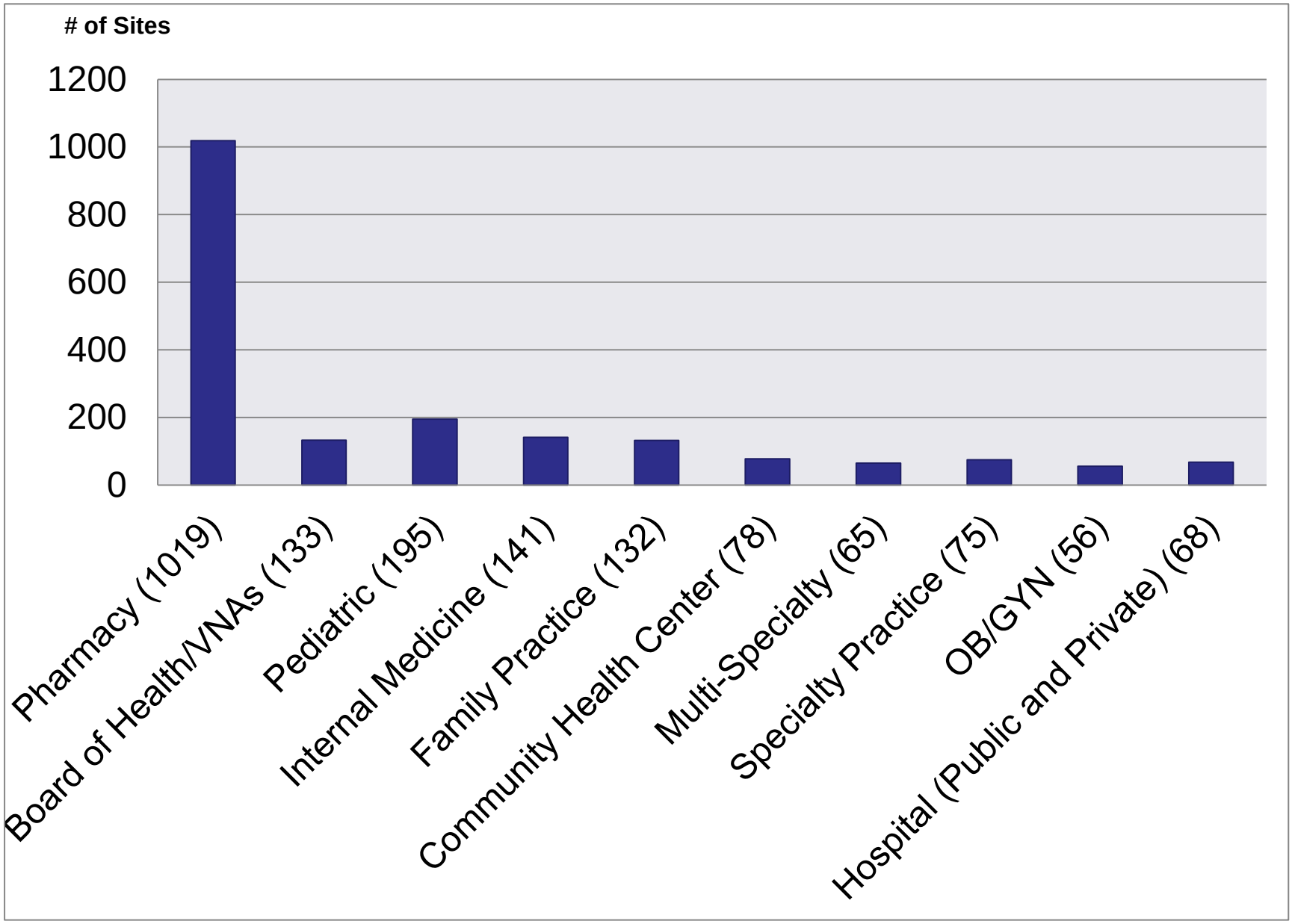
2015
- **Total Sites: 1,121**
- **Total Patients: 4,427,623**
- **Total Shots: 33,334,571**

2016
- **Total Sites: 1,970**
- **Total Patients: 5,770,424**
- **Total Shots: 40,464,697**

2017
- **Total Sites: 2,104**
- **Total Patients: 6,000,063**
- **Total Shots: 42,093,576**

Vaccinations Across the Lifespan

Number of Sites by Practice Type, MIIS



Invalid Dose Report

- Identifies patients who received an invalid dose of a selected vaccine

Data Quality Report

- Redesigned for enhanced performance

City/Town-wide Coverage & Reminder Recall Reports

- Designed specifically for Boards of Health
- Allows BOH to run reports for their patients or their geographical population

School Reports

- Compliance Report
- Students Not Fully Vaccinated Report

Bi-Directional Data Exchange

- Provider can query the MIIS and receive patient demographics, immunization history and forecast
- Meaningful Use requirement for stage 3

MIIS Accepts National Drug Codes from Provider HL7 Messages

- Meaningful Use requirement for stage 3

Weekly HL7 message status report via email

- Identify abnormal data submissions or message failures to alert IT

Looking Ahead…

Late Summer-2017

- **Delivered Reports**
  - Allows for long running reports to be accessible at a later time in the MIIS.
- **Reminder Recall for a single patient**
- **Shot De-duplication improvements**
- **Vaccine Management Dashboard**

MDPH Immunization Program Contact Information

Immunization Program Main Number

For questions about immunization recommendations, disease reporting, etc.

- **Phone:** 617-983-6800
- **Fax:** 617-983-6840
- **Website:** www.mass.gov/dph/imm

MIIS Help Desk

- **Phone:** 617-983-4335
- **Fax:** 617-983-4301
- **Email:** miishelpdesk@state.ma.us
- **Websites:** www.contactmiis.info | www.mass.gov/dph/miis

MDPH Vaccine Unit

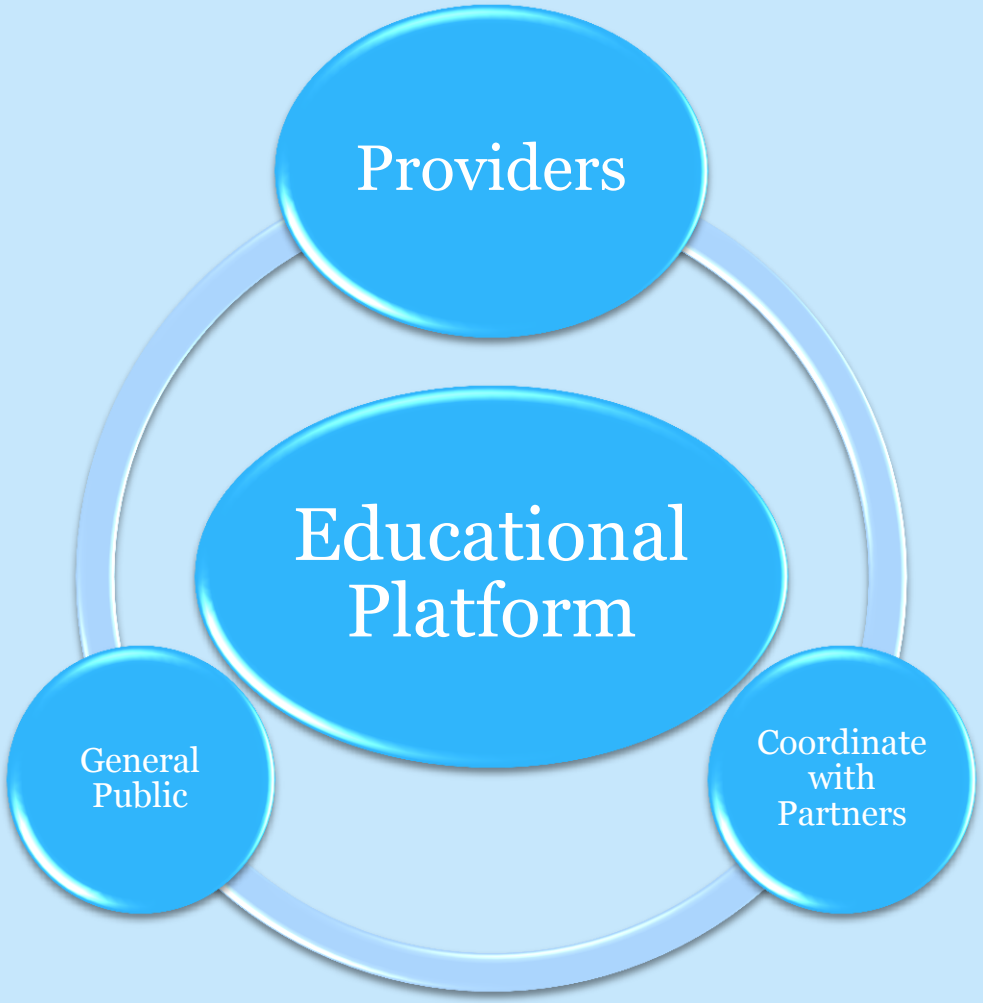
- **Phone:** 617-983-6828
- **Fax:** 617-983-6924
- **Email:** dph-vaccine-management@state.ma.us
- **Website:** www.mass.gov/dph/imm (click on Vaccine Management)

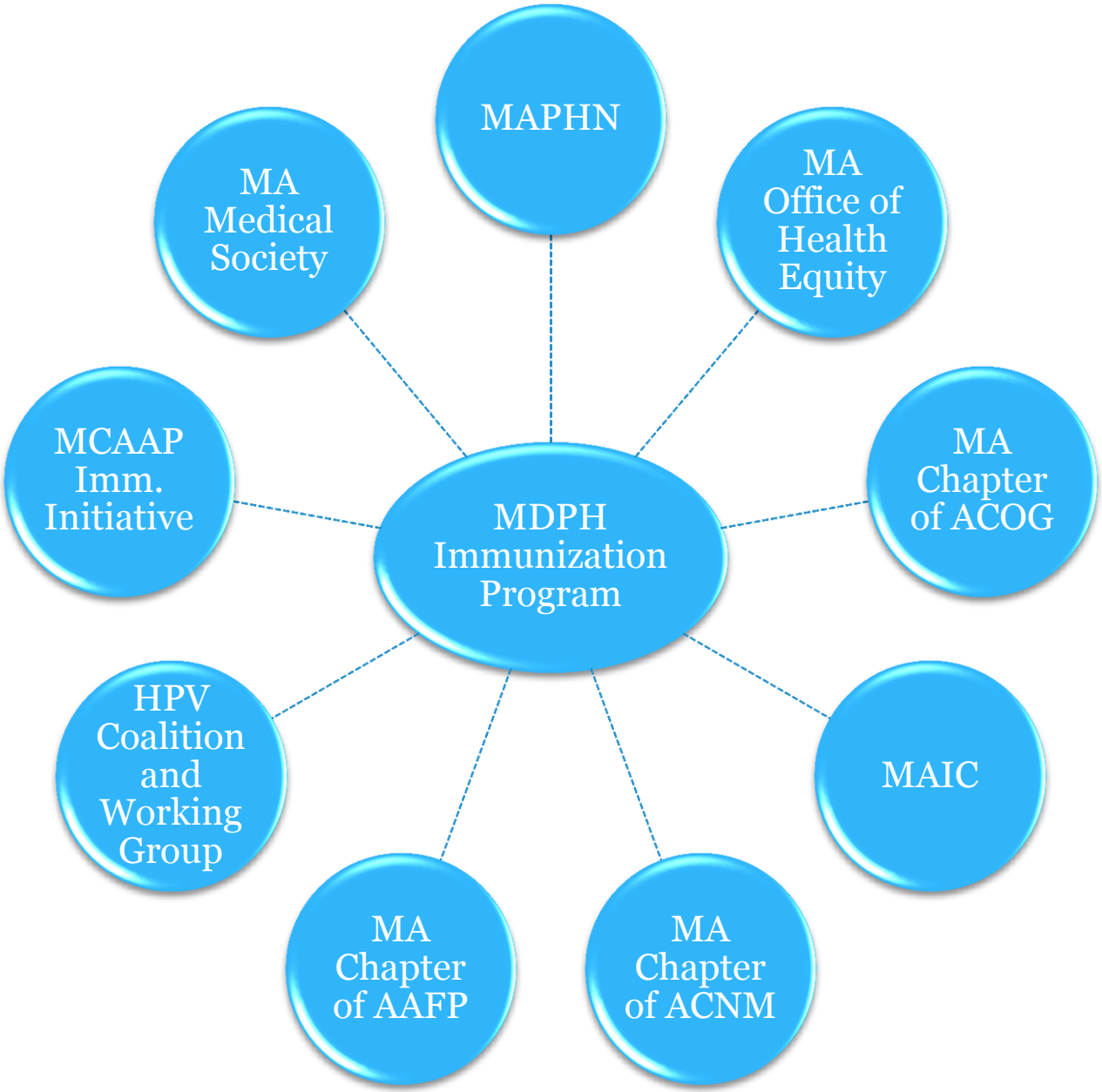
MDPH Immunization Program Outreach and Education

REBECCA VANUCCI
IMMUNIZATION OUTREACH COORDINATOR
CO-FACILITATOR OF MAIC
REBECCA.VANUCCI@STATE.MA.US

APRIL 25, 2017

What is the Immunization Program Educational Platform?

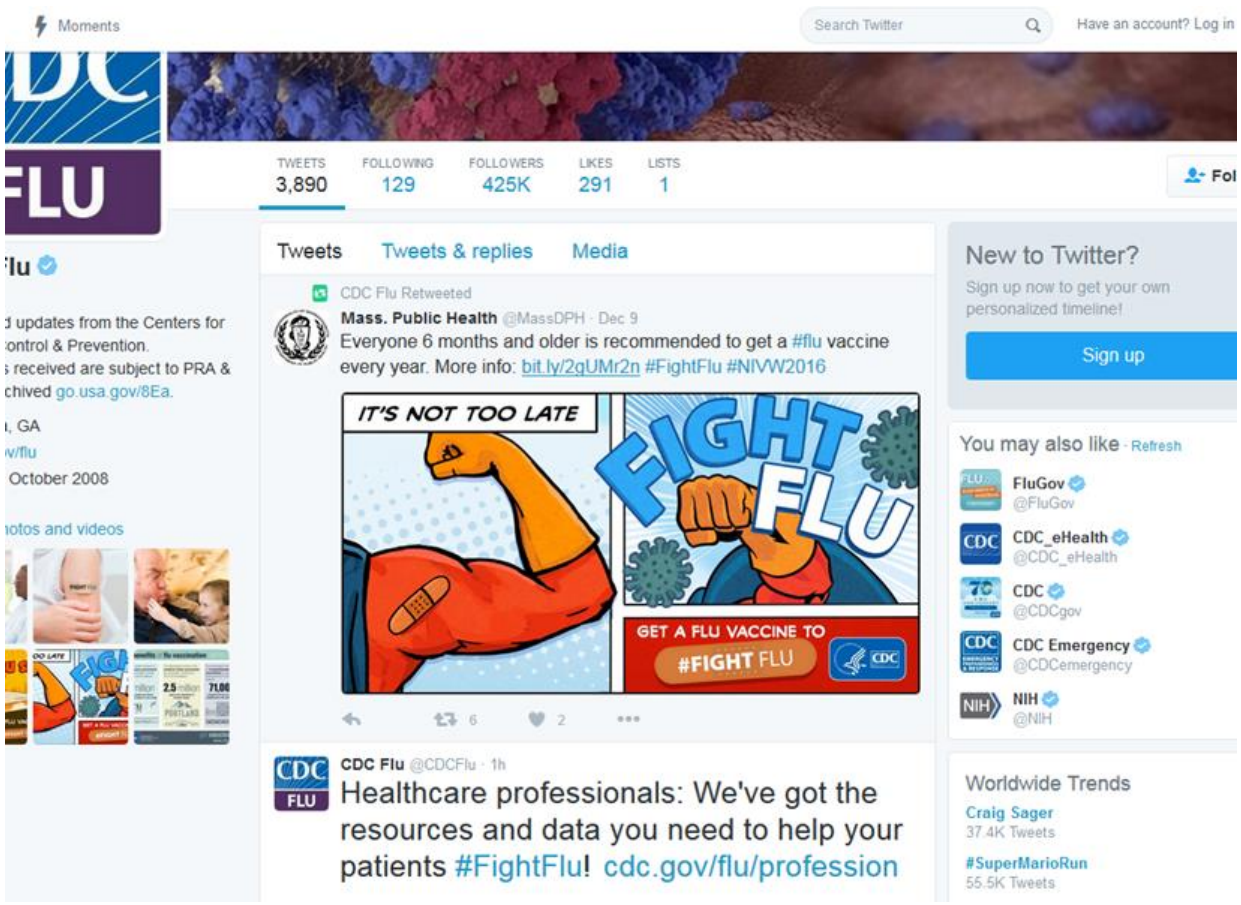



MAPHN
MA Medical Society
MA Office of Health Equity
MCAAP Imm. Initiative
MDPH Immunization Program
MA Chapter of ACOG
HPV Coalition and Working Group
MAIC
MA Chapter of AAFP
MA Chapter of ACNM

December 4-11, 2016

MA Department of Health Blog: It's Not Too Late the Get a Flu Vaccine! http://blog.mass.gov/publichealth/flu-facts/its-not-too-late-to-get-a-flu-vaccine/

Tweets throughout the week on DPH Twitter



National Influenza Vaccination Week

Cervical Health Awareness Month

- HPV Digital Billboard
- New General Audience Website
- Public Health Blog and Twitter

CDC Syndicated Content

National Immunization Awareness Month

Most Popular tweet of the campaign

MA Adult Immunization Coalition (MAIC)

- MAIC is a collaborative partnership dedicated to increasing adult immunization through education, networking, and sharing innovative and best practices.
- There are currently over 200 members representing:
  - Local and state public health organizations
  - Community health centers
  - Health insurance plans
  - Pharmacies
  - Physicians
  - Vaccine manufacturers
  - Long-term-care and senior service organizations
  - Consumer advocacy groups
  - Hospitals
  - Home health
  - College health services

Massachusetts Adult Immunization Coalition

Next meeting!

Thursday, June 1st
6:30pm at
Massachusetts Medical Society

Sign up at the MMS table today or learn more at http://maic.jsi.com/

MA Public Clinic Billing Project

- For 10% fee, CHCF at Commonwealth Medicine electronically bills the participating plans and distributes payments to public providers
  - 10 private health plans and MassHealth participate
- Cities and towns can bill contracted plans for the:
  - Administration of state-supplied flu vaccine to individuals ages 6 months and older
  - Cost of purchasing and administering all recommended vaccines to adults for private health plans
  - Cost of purchasing and administering influenza and pneumococcal vaccines to Medicare Part B
  - 175 public sector providers across the state participate, representing 214 out of 351 towns in MA
- **> $2.5 million reimbursed to communities last flu season**

Recent Vaccine Confidence Tools

Every Child By Two's *State of the ImmUnion*

http://vaccinateyourfamily.org/files/resources/State_of_the_ImmUnion_2017_ReportECBT_(1).pdf

Policy Lab's *Addressing Vaccine Hesitancy*

EXECUTIVE SUMMARY

Vaccines have successfully eliminated or dramatically reduced the incidence of many infectious diseases in the United States. Routine immunization of all children born in one year can:[1]

- Save 42,000 lives,
- Prevent 20 million cases of disease,
- Reduce direct health care costs by $13.5 billion and
- Save $68.8 billion in total societal costs.

http://policylab.chop.edu/evidence-action-brief/addressing-vaccine-hesitancy-protect-children-and-communities-against

Questions?

Rebecca Vanucci
Immunization Outreach Coordinator
rebecca.vanucci@state.ma.us
617-983-6534