

2013-2014 Influenza Season

Influenza Vaccines

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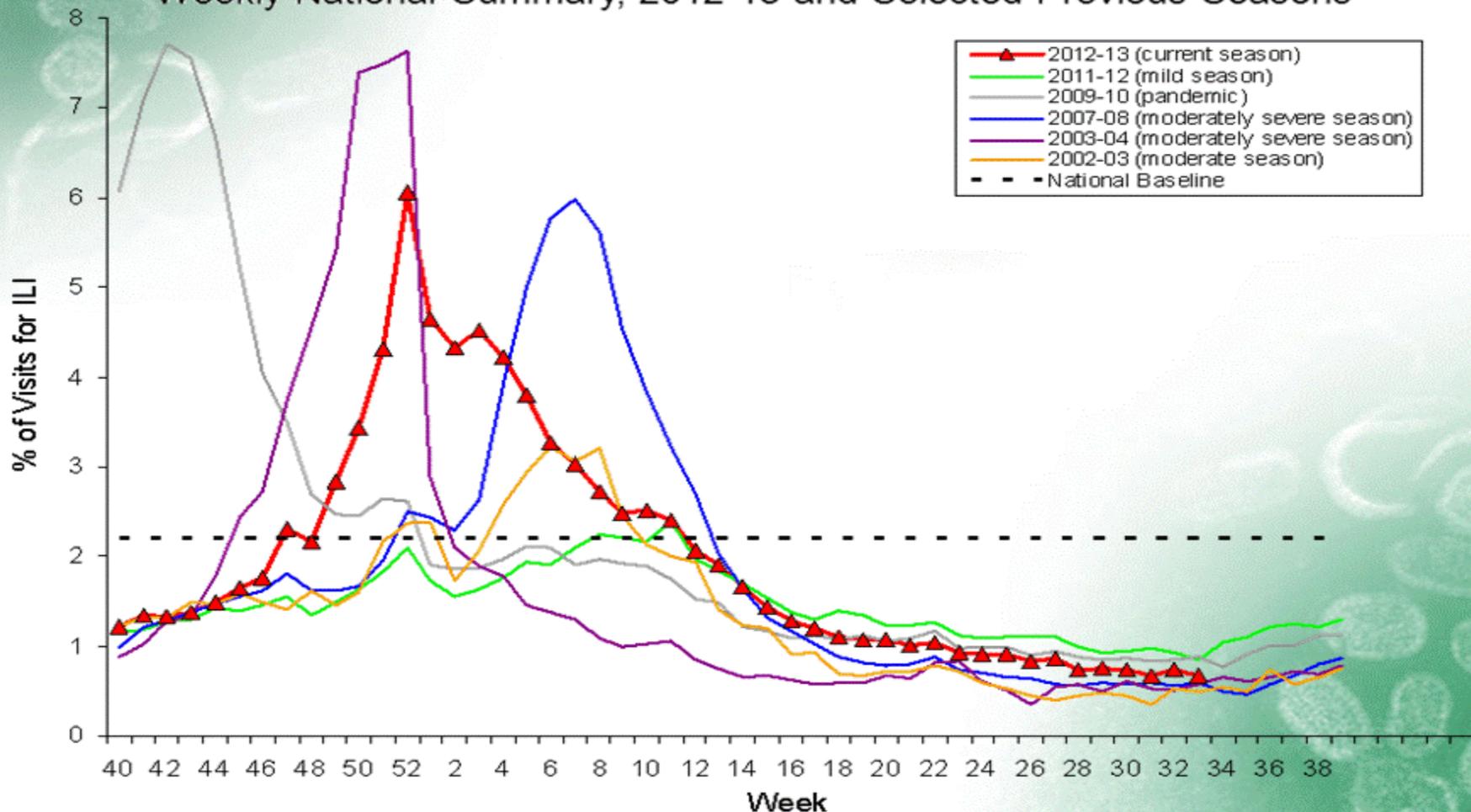
Overview

- Influenza summary for 2012-2013
- Vaccine virus strains for 2013-2014
- Influenza vaccines available for 2013-2014
 - NEW Quadrivalent vaccines
 - NEW cell-based and recombinant trivalent vaccines
- Influenza vaccine recommendations
- Influenza vaccines in RPMS
- Resources

FLUVIEW

A Weekly Influenza Surveillance Report Prepared by the Influenza Division

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2012-13 and Selected Previous Seasons



2012-2013 Influenza Season Recap

- Relatively early season
 - Influenza-like-illness peaked in December
- More severe than previous season
- Predominantly H3N2
- Higher hospitalization and mortality rates among the elderly
- 158 pediatric deaths
 - Higher than the 2 previous seasons
 - 2009-2010 Pandemic – 282 deaths

Protect the Circle of Life

**Your Flu Vaccine Protects Me
My Flu Vaccine Protects You**

- The flu vaccine is safe. You can't get the flu from a flu vaccine.
- Pneumonia and flu are a leading cause of death among Native elders.
- Please get a flu vaccine each year to protect you and your family.

Learn more at www.cdc.gov/flu
or call 1-800-CDC-INFO

**I won't spread flu
to my patients
or my family.**

Even healthy people can get the flu, and it can be serious.

Everyone 6 months and older should get a flu vaccine. This means you.

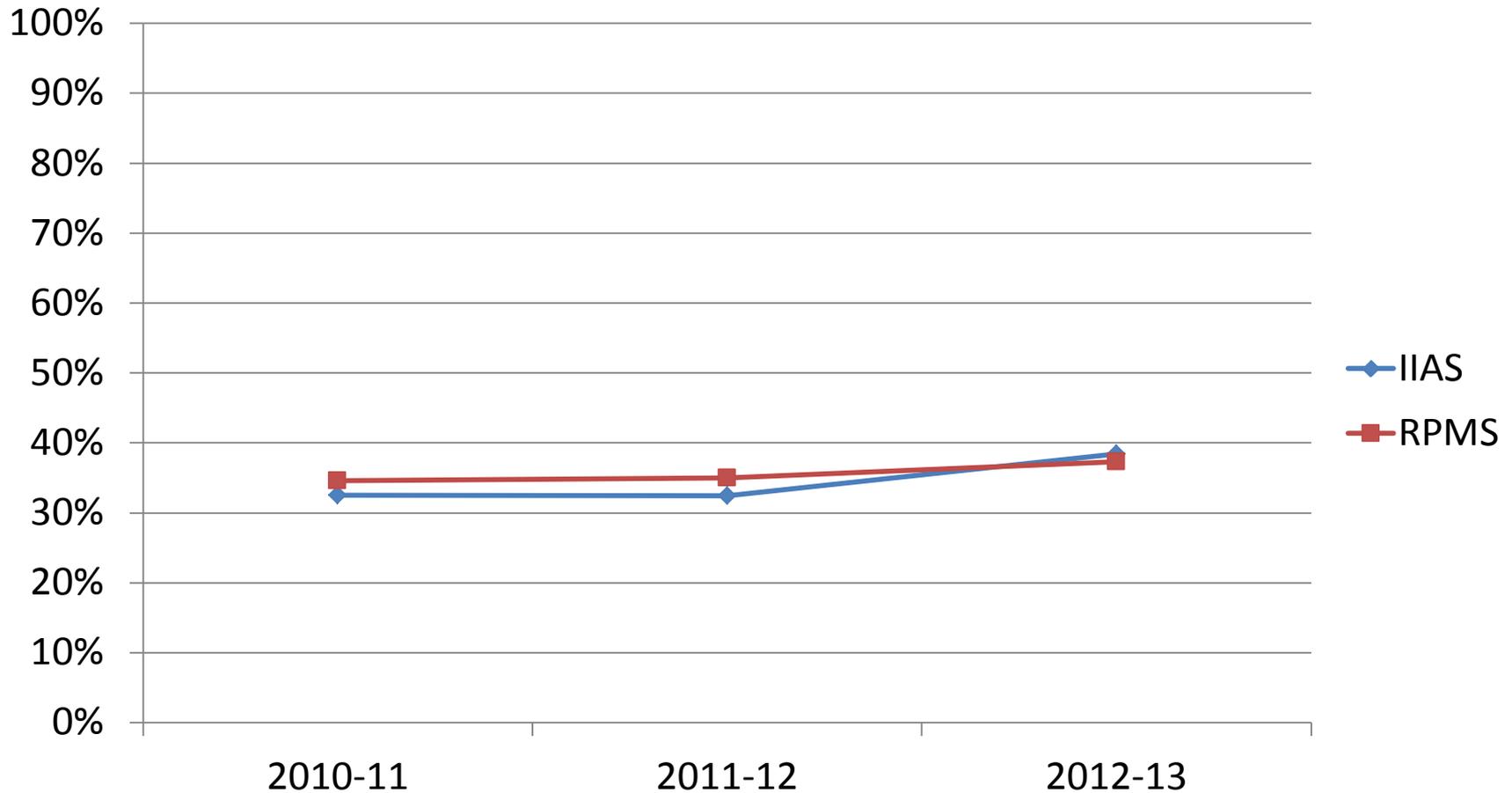
This season, protect yourself—and those around you—by getting a flu vaccine.

For more information, visit: <http://www.flu.gov>

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

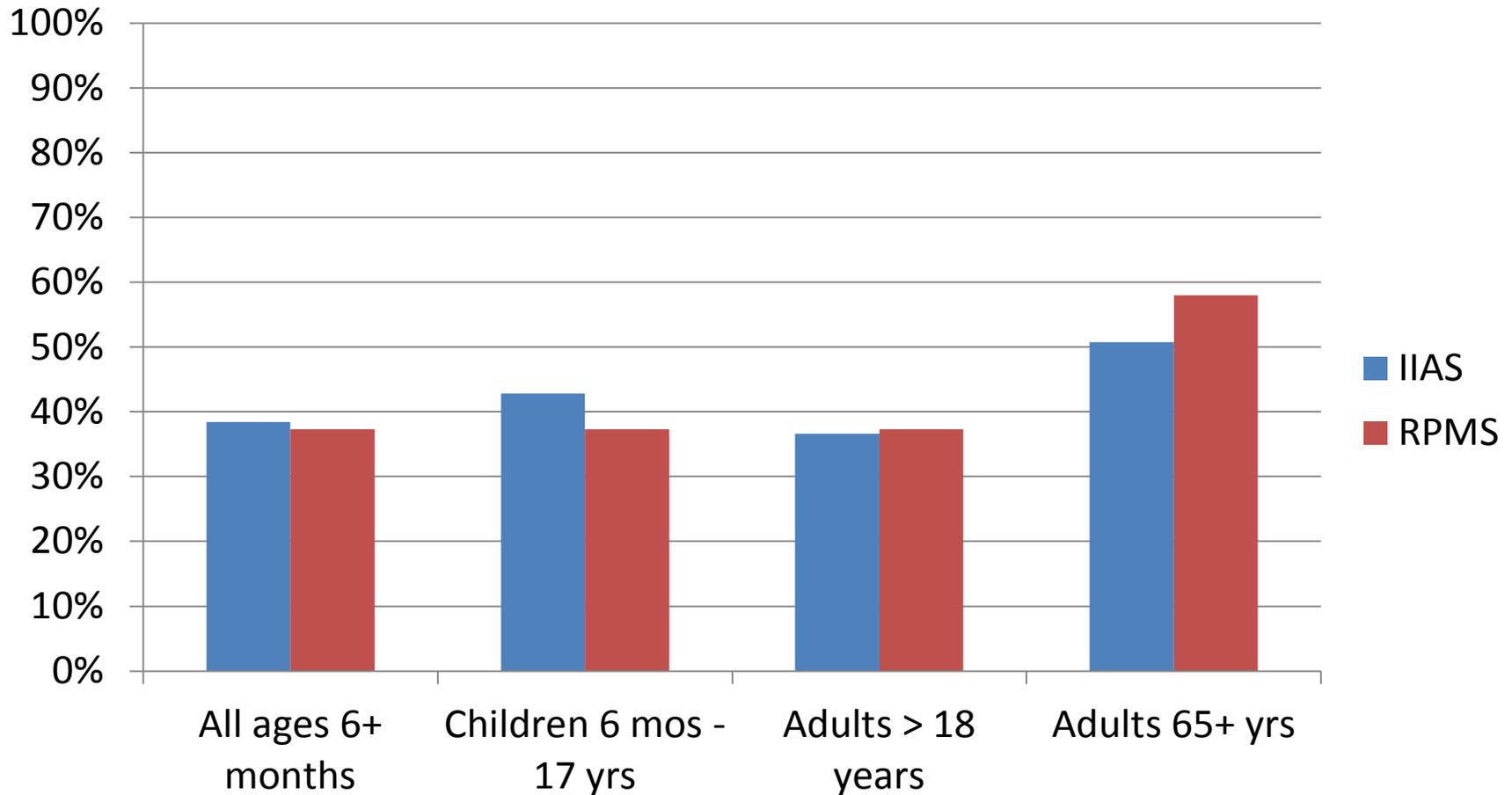
IHS INFLUENZA VACCINE COVERAGE FOR 2012-2013

IHS Influenza Vaccine Coverage 1 dose, All Ages (≥ 6 months)



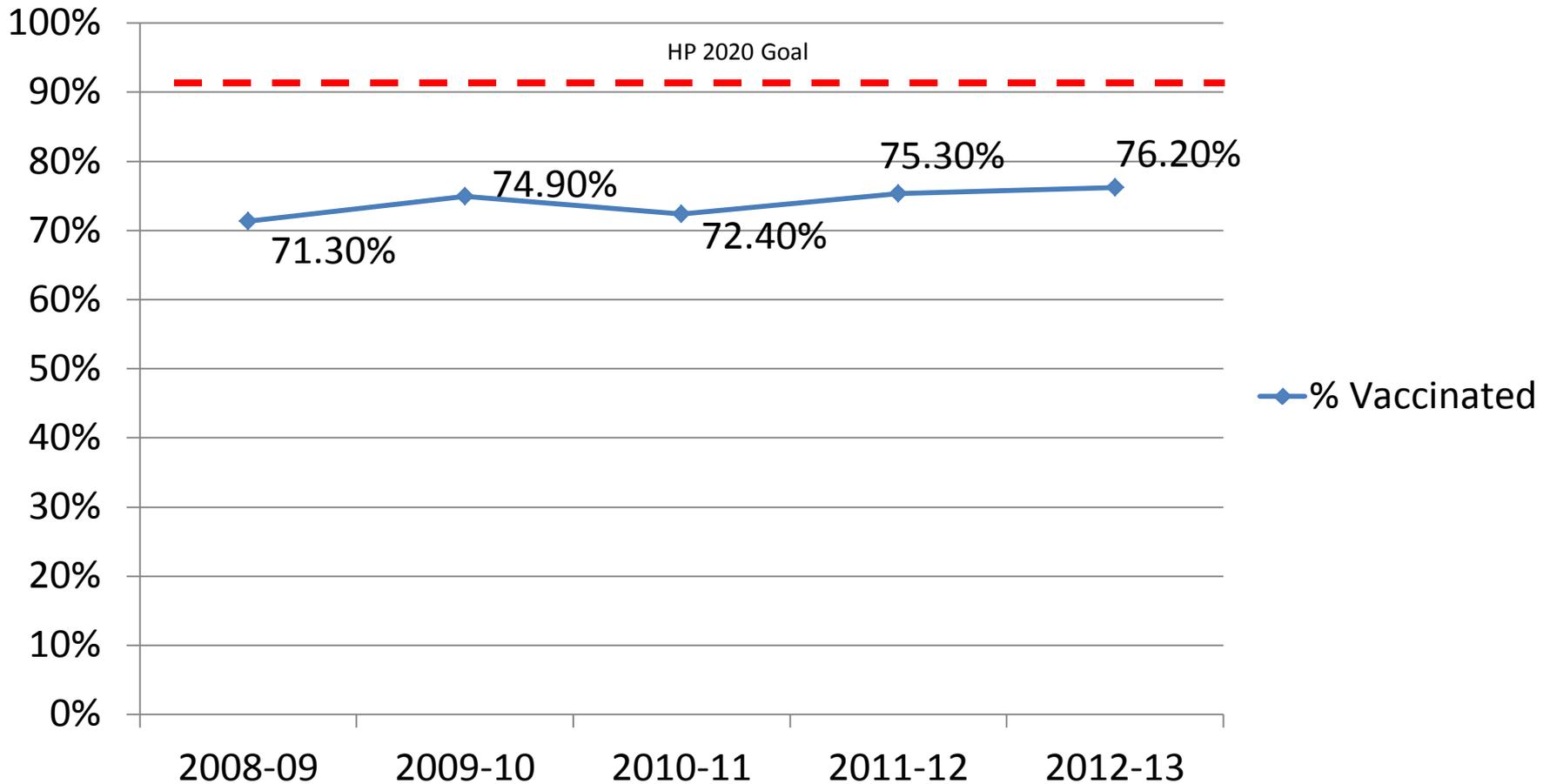
IHS Influenza Awareness System (IIAS) vs. Quarterly Immunization Package reports from RPMS

IHS Influenza Vaccine Coverage 2012 - 2013



IIAS – IHS Influenza Awareness System; RPMS – RPMS Quarterly Immunization Report

IHS Healthcare Personnel Influenza Vaccination Coverage



IHS Influenza Vaccine Coverage reports available at: www.ihs.gov/flu

"I got my flu shot!
Did you?"

I talked to my doctor and I learned that being pregnant, my body has changed. So now I can get sicker from the flu.

And the flu shot doesn't work in my baby until 6 months of age - but if I get the shot now, I can help protect my baby until then."

To learn more, talk with *YOUR* doctor and go to flu.gov.

**Spread fun.
Not Flu.**

Even healthy kids of any age can get seriously sick from the flu, and they can spread it to family, friends, and others.

Everyone 6 months of age and older should get a flu vaccine every year.

Get Your Flu Vaccine. Not the Flu.
The flu benefits is a covered service for Medicare and for children enrolled in Medicaid and CHIP.

For more information, visit <http://www.flu.gov>

"By protecting myself I am protecting her."

If you're 65 years or older, getting a flu shot is the best way to protect yourself and those around you from flu.

The flu benefits is a covered service for Medicare and for children enrolled in Medicaid and CHIP.

<http://www.flu.gov>
1-800-CDC-INFO

INFLUENZA VACCINES FOR 2013-2014

Vaccine virus strains for 2013-2014

- The 2013-2014 trivalent influenza vaccine is made from the following three viruses:
 - A/California/7/2009 (H1N1)pdm09-like virus
 - A(H3N2) virus antigenically like the cell-propagated prototype virus A/Victoria/361/2011
 - B/Massachusetts/2/2012-like virus
- For quadrivalent influenza vaccines, a second B strain is added to the 3 strains listed above
 - B/Brisbane/60/2008-like virus

Influenza B

- Less antigenic diversity than influenza A
- Prior to 1980: B/Yamagata was major circulating lineage
- 1980: B/Victoria emerged
- Both lineages with drift variants circulate globally, generally with one predominating during any given season
- More difficult to predict than influenza A: mismatch between vaccine and circulating strains 6 of 12 seasons, 2001-2012
- 2012: WHO recommends quadrivalent vaccines containing both B lineages

Flu vaccines – New Nomenclature

- Trivalent Inactivated Influenza Vaccine
 - Formerly TIV, now IIV3
- Quadrivalent Inactivated Influenza Vaccine
 - Formerly QIV, now IIV4
- Live Attenuated Influenza Vaccine, Quadrivalent
 - LAIV4
- Recombinant Inactivated Influenza Vaccine, Trivalent
 - RIV3
- Cell Culture Inactivated Influenza Vaccine, Trivalent
 - cclIV3

Flu Vaccines available for 2013-2014

TABLE 1. Influenza Vaccines — United States, 2013–14 influenza season*

Vaccine	Trade name	Manufacturer	Age Indication
Inactivated Influenza Vaccine, Trivalent [†] (IIV3), Standard Dose	Afluria [®]	CSL Limited	≥ 9 yrs
	Fluarix [®]	GlaxoSmithKline	≥ 3 yrs
	Flucelvax ^{®\$\$\$}	Novartis Vaccines	≥ 18 yrs
	FluLaval [®]	ID Biomedical Corporation of Quebec (distributed by GlaxoSmithKline)	≥ 3 yrs
	Fluvirin [®]	Novartis Vaccines	≥ 4 yrs
	Fluzone [®]	Sanofi Pasteur	≥ 6 months
	Fluzone [®] Intradermal [§]	Sanofi Pasteur	18 yrs through 64 yrs
Inactivated Influenza Vaccine, Trivalent [†] (IIV3), High Dose	Fluzone [®] High-Dose**	Sanofi Pasteur	≥ 65 yrs
Inactivated Influenza Vaccine, Quadrivalent [†] (IIV4), Standard Dose	Fluarix [®] Quadrivalent	GlaxoSmithKline	≥ 3 yrs
	Fluzone [®] Quadrivalent	Sanofi Pasteur	≥ 6 months
	FluLaval [®] Quadrivalent	GlaxoSmithKline	≥ 3 yrs
Recombinant Influenza Vaccine, Trivalent ⁺⁺⁺ (RIV3)	FluBlok [®]	Protein Sciences	18 yrs through 49 yrs
Live-attenuated Influenza Vaccine, Quadrivalent ⁺⁺⁺ (LAIV4)	FluMist [®] Quadrivalent ⁺⁺	MedImmune	2 yrs through 49 yrs

Quadrivalent Vaccines

- **Inactivated Influenza Vaccine quadrivalent (IIV4)**
 - Fluarix[®] Quadrivalent (GlaxoSmithKline)
 - Age indication: ≥ 3 years
 - FluLaval[®] Quadrivalent (GlaxoSmithKline)
 - Age indication: ≥ 3 years
 - Fluzone[®] Quadrivalent (Sanofi Pasteur)
 - Age indication: ≥ 6 months
 - All three vaccines are also available as trivalent vaccines
- **Live Attenuated Influenza Vaccine Quadrivalent (LAIV4)**
 - FluMist[®] Quadrivalent (Medimmune)
 - Age indication: 2 – 49 years
 - NOTE: ALL FluMist[®] will be quadrivalent. There will be no trivalent FluMist[®] available for the 2013-2014 season.

New trivalent Inactivated vaccines using alternative technologies

- **FluBlok - Recombinant Influenza Vaccine, Trivalent^{†††} (RIV3) - Protein Sciences**
 - 100% egg-free
 - Hemagglutinin proteins produced in an insect cell line
 - Age indication: 18-49 years old
- **Flucelvax - Cell Culture Influenza Vaccine, Trivalent (ccIIV3) – Novartis**
 - Although not egg-based, traces of egg protein may remain, so is technically not 100% egg-free
 - “subunit” flu vaccine grown on MDCK cell line
 - Age indication: 18 years and older

Influenza Vaccine: Does It Work?

- Influenza Vaccine Effectiveness Network
- Case–control study during the 2012-13 season comparing vaccination histories between
 - 1,115 subjects with ARI documented to be influenza by rRT-PCR
 - 1,582 influenza test-negative controls
- Sites:
 - Seattle, WA (Group Health)
 - Marshfield, WI (Marshfield Clinic)
 - Ann Arbor and Detroit, MI (Univ of Michigan and Henry Ford Health System)
 - Pittsburgh, PA (University of Pittsburgh Medical Center)
 - Temple, TX (Scott and White Healthcare)

Influenza Vaccine Effectiveness Network, 2012-13, 2,697 Patients with ARI

	Influenza + % Vaccinated	Influenza – % Vaccinated	Vaccine Effectiveness (95% CI)
Overall	33%	50%	56% (47%-63%)
6 mon-17 yrs	26%	49%	64% (51%-73%)
18 yrs-49 yrs	28%	42%	52% (38%-79%)
50 yrs-64 yrs	36%	58%	63% (43%-76%)
≥65 yrs	69%	72%	27% (-31%-59%)
Influenza A-H3N2	39%	50%	47% (35%-58%)
Influenza B	25%	47%	67% (51%-78%)

Influenza Vaccine: Does It Work?

- Risk of medically attended influenza and fetal death among 117,347 pregnant women in Norway during 2009 pandemic
 - 54% vaccinated during 2nd or 3rd trimester
 - Vaccine effectiveness 70% (95% CI 66% to 75%)
 - Hazard ratio of fetal loss:
 - Vaccination: 0.88 (95% CI 0.66 to 1.17)
 - Influenza: 1.91 (95% CI 1.07 to 3.41)
- Benefits of vaccinating pregnant women
 - Less influenza illness and risk of death
 - Less fetal loss due to influenza
 - Some immunity during first 6 months of life

2013-2014 ACIP Flu Recommendations

- Routine annual influenza vaccination is recommended for all persons aged 6 months and older
 - Criteria for children < 9 yrs requiring 2 doses are the same as the 2012-2013 season
- ACIP expresses no preference for any one vaccine over another for persons for whom more than one type of vaccine is appropriate and available. e.g., no preference for
 - LAIV vs. IIV
 - Regular dose IIV3 vs. high-dose IIV3
 - Intramuscular IIV3 vs. intradermal IIV3
 - Quadrivalent vs. Trivalent vaccines (IIV4 vs. IIV3)
 - Cell culture/recombinant vs. egg-based
- Individuals living or caring for **severely** immuno-compromised (e.g. those living in a protective environment) should not receive LAIV
- Pregnant women should not receive LAIV
- Individuals with anaphylactic egg allergy should receive RIV3 if appropriate, or referred to a physician with experience managing allergic conditions for vaccination

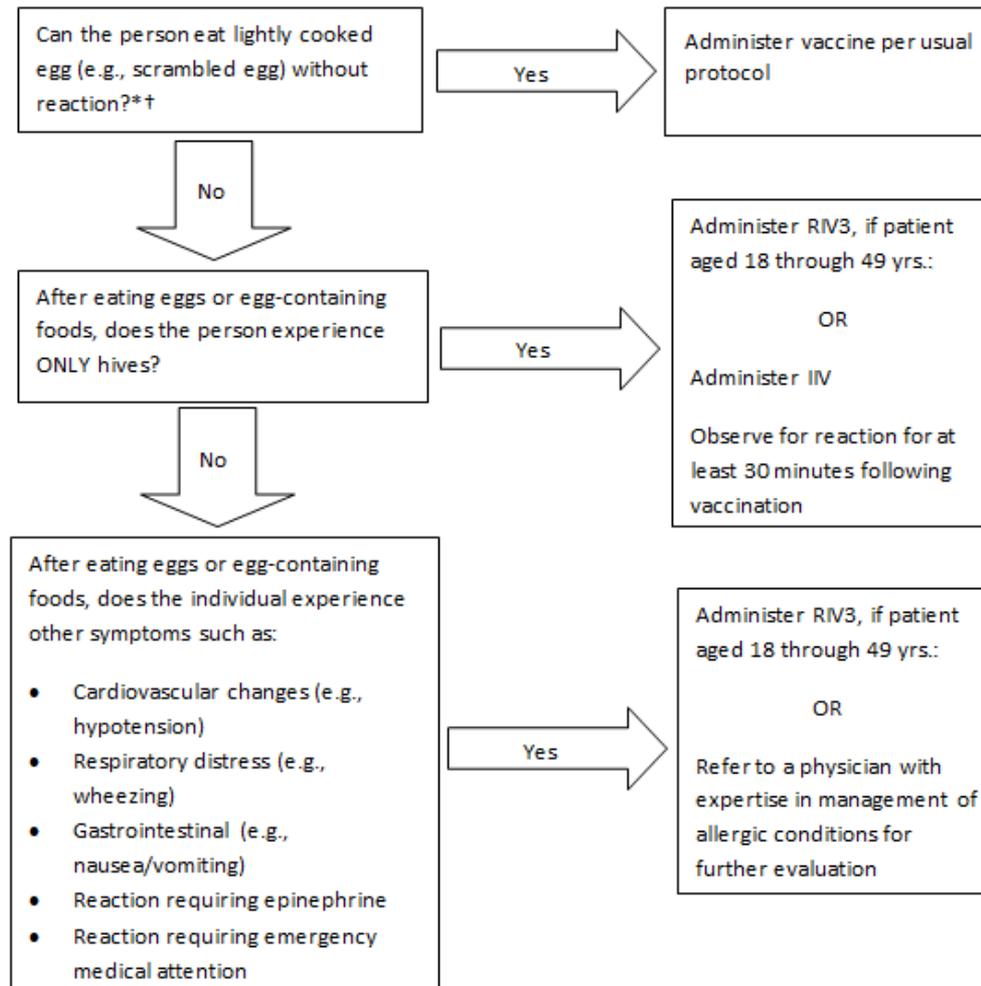
Groups at Higher Risk for Influenza Complications

- Persons <2 or ≥65 years of age;
- Persons with the following conditions:
 - chronic pulmonary (including asthma),
 - cardiovascular (except hypertension),
 - renal, hepatic, hematological (including sickle cell) disease,
 - neurological, neuromuscular, or metabolic disorders (including diabetes mellitus);
- Immunosuppression, including that caused by medications or by HIV infection;
- Women who are pregnant or post-partum (2 weeks)
- Persons younger than 19 years of age who are receiving long-term aspirin therapy;
- American Indians and Alaska Natives;
- Persons who are morbidly obese (body-mass index ≥40);
- Residents of nursing homes and other chronic-care facilities.

Expanded dose algorithm for 6 months through 8 year olds

- **One dose needed in 2013-14 if child received:**
 - ≥ 2 seasonal Flu doses after 7/1/2010
 - ≥ 2 seasonal Flu doses before 7/1/2010 plus 1 dose of H1N1
 - ≥ 1 seasonal Flu dose before 7/1/2010 plus ≥ 1 dose since 7/1/2010
- **Otherwise, children 6 months to <9 years need 2 doses at least 4 weeks apart**

Recommendations for persons who have or report egg allergies



IIV=Inactivated Influenza Vaccine; RIV3=Recombinant Influenza Vaccine, Trivalent

*Individuals with egg allergy may tolerate egg in baked products (e.g. bread, cake). Tolerance to egg-containing foods does not exclude the possibility of egg allergy (2).

† For individuals who have no known history of exposure to egg, but who are suspected of being egg-allergic on the basis of previously performed allergy testing, consultation with a physician with expertise in the management of allergic conditions should be obtained prior to vaccination. Alternatively, RIV3 may be administered if the recipient is aged 18 through 49 years.

DOCUMENTING INFLUENZA VACCINES IN RPMS

Influenza Vaccines in RPMS Version 8.5*5

CVX Code	Full vaccine name (CDC abbreviation)	RPMS Short Name	Brand	Manufacturer
Trivalent Inactivated Vaccines (IIV3)				
141	Influenza, seasonal, injectable, trivalent	FLU-IIV3	Afluria®, multi-dose vial	CSL Limited
			FluLaval®, multi dose vial	ID Biomedical Corp.
			Fluvirin®, multi dose vial	Novartis
			Fluzone®, multi dose vial	Sanofi Pasteur
140	Influenza, seasonal, injectable, preservative free , trivalent	FLU-IIV3pf	Afluria®, single dose syringe	CSL Limited
			Fluarix® single dose syringe	GSK
			Fluvirin®, single dose syringe	Novartis
			Fluzone®, single dose syringe, single dose vial	Sanofi Pasteur
144	Seasonal influenza, intradermal, preservative free, trivalent	FLU-DERMAL	Fluzone® Intradermal	Sanofi Pasteur
135	Influenza, high dose seasonal, preservative-free	FLU-HIGH	Fluzone® High Dose	Sanofi Pasteur
155	Seasonal, trivalent, recombinant, injectable influenza vaccine, preservative free (RIV)	FLU-RIV3	FluBlok®	Protein Sciences
153	Influenza, injectable, Madin Darby Canine Kidney, preservative free (cell culture) (ccIIV3)	FLU-ccIIV3	Flucelvax®	Novartis
Quadrivalent Inactivated Vaccines (IIV4)				
150	Influenza, injectable, quadrivalent, preservative free	FLU-IIV4pf	Fluarix® Quadrivalent, single dose syringe	GSK
			Fluzone® Quadrivalent, single dose syringe and single dose vial	Sanofi Pasteur
158	Influenza, injectable, quadrivalent	FLU-IIV4	FluLaval® Quadrivalent, multi dose vial	GSK
Quadrivalent Live Attenuated Virus Vaccines (LAIV4)				
149	Influenza, live, intranasal, quadrivalent (LAIV4)	FLU-LAIV4	FluMist®	MedImmune
Codes that should ONLY be used to record vaccines given elsewhere, if formulation is unknown				
88	Influenza virus vaccine, unspecified formulation	FLU-NOS	None	None
Codes that should not be used this influenza season - Inactivate them in your vaccine table				
15	Influenza virus vaccine, split virus (incl. purified surface antigen)-retired CODE	FLU-TIVhx	None	None
16	influenza virus vaccine, whole virus	FLU-WHOLE	None	None
111	Influenza virus vaccine, live, attenuated, for intranasal use, trivalent (LAIV3)	FLU-LAIV3	FluMist®	MedImmune
151	Influenza nasal, unspecified formulation	FLU-NasNOS	FluMist®	MedImmune
123	Influenza virus vaccine, H5N1, A/Vietnam/1203/2004 (national stockpile)	FLU-H5N1	None	None

Red denotes new RPMS Short Name

RPMS Immunization Package

- New codes are included in Version 8.5 patch 5
 - Patch 5 will be released in the next week
- New codes will be inactive in the Vaccine Table
 - Sites must activate them to use them
- CVX code 111 – Flu-LAIV3 will be inactive
 - This is the trivalent LAIV (FluMist®) vaccine - will not be available this year
- Forecasting
 - Same as last year – begins August 1st, ends March 31st
 - 2 dose algorithm for children < 9 years included

Q: We are beginning flu vaccination now, and received some of the new vaccines (e.g. quadrivalent inactivated), but those codes aren't yet available because patch 5 has not been released. What should we do?

A: For sites that are beginning influenza vaccination and are using products that are not currently in the RPMS Immunization Package (e.g. quadrivalent inactivated influenza vaccine, cell culture, and recombinant trivalent inactivated vaccines), we suggest you use one of the other inactive influenza codes – e.g. FLU-TIVhx– to document.

- Once Patch 5 is released and loaded:
 1. Change the lot# for the Flu-TIVhx by adding a z, and inactivate it.
 2. Add the lot # with the new, correct flu code
 3. In Lists and Letters, run a list of patients who received the lot # with the z (e.g. the lot# for FLU-TIVhx).
 4. Edit patient records to reflect correct code/lot#.
- Codes for the trivalent inactivated influenza vaccine (140, 141), intradermal (144) high dose (135) as well as the new quadrivalent live attenuated influenza vaccine (149 – Flu-nasal4) are currently in the Immunization Package Version 8.5*4, and can be used.

But wait! There's more!

- Go to Lists and Letters in the Patient Menu
- Change the following parameters:
 - Age group (e.g. 0 – 100 years)
 - Patient group – include Active AND Inactive
 - Lot # - enter the lot # WITH THE Z IN FRONT OF IT
 - Alternatively, if multiple lot #s, can enter the FLU-TIVHx code under “Immunizations Received” parameter
- This will give you a list of patients who received the flu vaccine coded as FLU-TIVhx
 - You can then choose “E” to edit each patient in that list – go into the patient record and edit the immunization visit to change the vaccine type and change the correct lot# (without the Z).

IMMUNIZATION LISTS & LETTERS

1 - Date of Forecast/Clinic...: 06-Mar-2013

2 - Age Range.....: 0-100 Years

3 - Patient Group (01).....: Active, Inactive

4 - Community.....: ALL

5 - Case Manager.....: ALL

6 - Designated Provider.....: ALL

7 - Immunizations Received...: ALL [can limit to the FLU-TIVhx code if multiple lot#s]

8 - Immunizations Due.....: ALL

9 - Health Care Facility.....: DEMO HOSPITAL

10 - Lot Number.....: z12345

11 - Additional Information...: None

12 - Order of Listing.....: by Patient Age

13 - Include Deceased.....: No

Select a left column number to change an item.

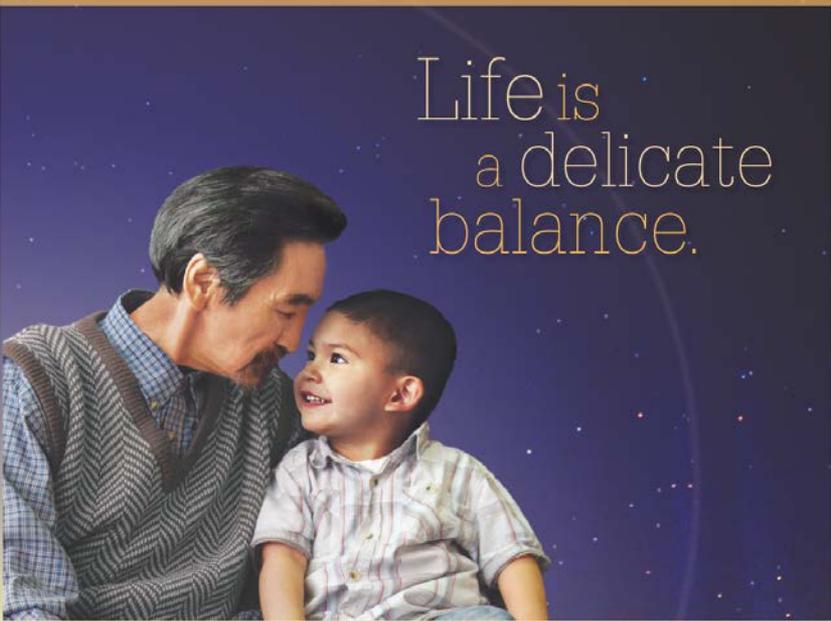
List of Patients

Print Due Letters

Help

Select Action: Quit//

RESOURCES



Life is
a delicate
balance.

Your flu vaccine protects me.
My flu vaccine protects you.

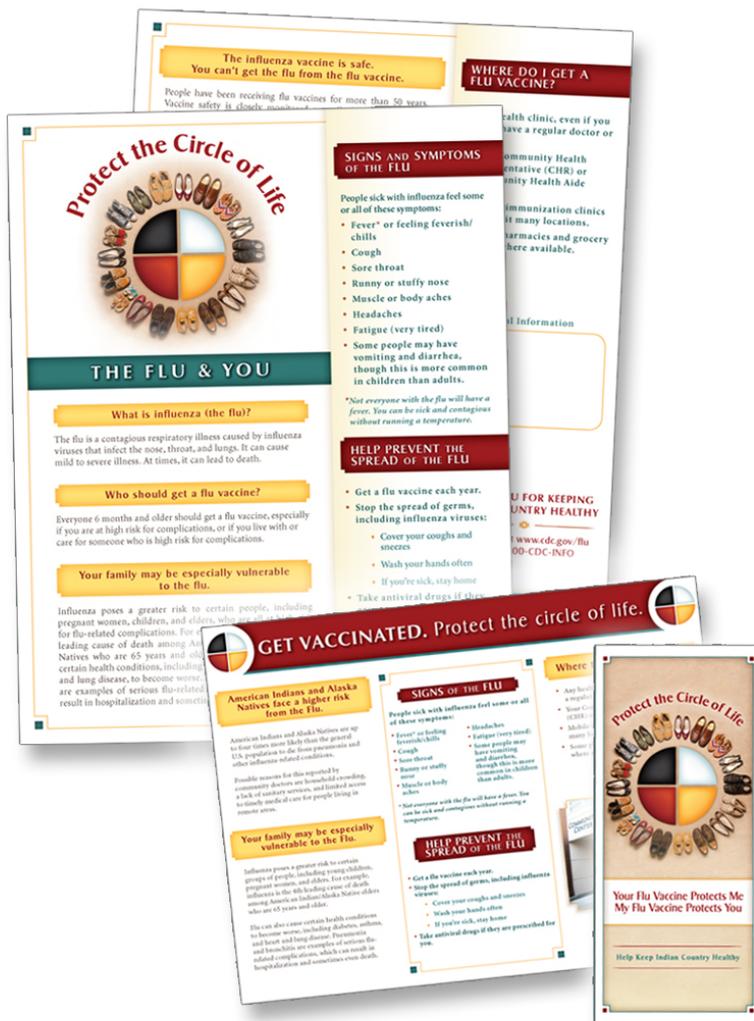
Even healthy people can get the flu, and it can be serious.
Everyone 6 months and older should get a flu vaccine.

**Help protect Alaska from the flu.
Get vaccinated.**

For more information, visit <http://www.flu.gov>



CDC Flu Materials for American Indians/Alaska Natives



Protect the Circle of Life

Your Flu Vaccine Protects Me My Flu Vaccine Protects You

- The flu vaccine is safe. You can't get the flu from a flu vaccine.
- The flu is the fourth leading cause of death among American Indian and Alaska Native elders.
- Please get a flu vaccine each year to protect you and your family.

Learn more at www.cdc.gov/flu
or call 1-800-CDC-INFO

Help Keep Indian Country Healthy

To order free copies: <http://www.cdc.gov/flu/freeresources/print.htm>

Resources

- Upcoming IHS Flu Webinars
 - IHS Clinical Rounds, Sept. 12th, 2 PM EDT
 - CHR Influenza Webinars – Sept. 13th, Oct. 2nd and Oct 7th, check website for times
- IHS Influenza Resources – www.ihs.gov/flu
- CDC Influenza resources – www.cdc.gov/flu
- CDC/ACIP Influenza Vaccination recommendations
 - <http://www.cdc.gov/flu/professionals/acip/2013-summary-recommendations.htm>