



- *The Presentation will begin shortly, until then there will be no audio.*



Seasonal Influenza Update

Past vaccination rates, new vaccine recommendations and general updates for the upcoming flu season.

Influenza Lunch and Learn

- Past Rates of Influenza Illness
- Details of Last Year's Flu Season
- Influenza Surveillance
- Historical Influenza Vaccination Rates
- Vaccine Information for the 2013-2014 Flu Season

Influenza Surveillance

Historical Rates of Flu

- North Dakota typically sees an average of 2500 cases of flu reported each year
- Rates vary considerably year to year

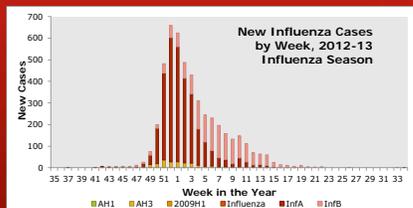
Week in the Year	2008-09	2009-10	2010-11	2011-12	2012-13
35	0	0	0	0	0
37	0	0	0	0	0
39	0	0	0	0	0
41	0	800	0	0	0
43	0	0	0	0	0
45	0	0	0	0	0
47	0	0	0	0	0
49	0	0	0	0	0
51	0	0	0	0	0
1	0	0	0	0	650
3	0	0	0	0	200
5	0	0	0	0	250
7	0	0	0	0	200
9	0	0	0	0	150
11	0	0	0	0	100
13	0	0	0	0	50
15	0	0	0	0	20
17	0	0	0	0	10
19	0	0	0	0	5
21	0	0	0	0	2
23	0	0	0	0	1
25	0	0	0	0	0
27	0	0	0	0	0
29	0	0	0	0	0
31	0	0	0	0	0
33	0	0	0	0	0

Historical Rates of Flu

MMWR Week	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013
36	0	0	0	0	0	0	0	0	0	0	0	0
38	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0
42	0	0	0	0	0	0	0	0	0	0	0	0
44	0	0	0	0	0	0	0	0	0	0	0	0
46	0	0	0	0	0	0	0	0	0	0	0	0
48	0	0	0	0	0	0	0	0	0	0	0	0
50	0	0	0	0	0	0	0	0	0	0	0	0
52	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0

2012-2013 Influenza Season

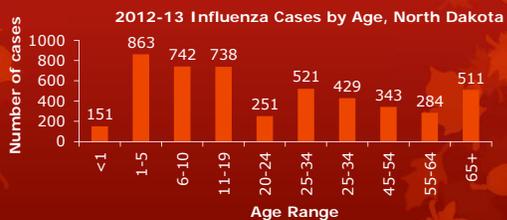
- 4833 cases reported in North Dakota—the largest year to date.



- Influenza A cases were predominantly H3N2. Cases of Influenza B were split between two different B strains, only one of which was in the vaccine.

2012-2013 Influenza Season

- Included within the 4833 cases, there were 9 deaths, 210 hospitalizations, and 32 long term care facility outbreaks reported last flu season.
- Cases by Age Group:



2012-2013 Influenza Season

- 2012-13 Cases by County

Adams	31	Divide	32	Lamoure	22	Pembina	112	Stark	371
Barnes	35	Dunn	35	Logan	51	Pierce	16	Steele	3
Benson	10	Eddy	7	McIntosh	55	Ramsey	26	Stutsman	165
Billings	3	Emmons	42	McHenry	29	Ransom	31	Towner	8
Bottineau	22	Foster	12	McKenzie	135	Renville	7	Traill	5
Bowman	70	Golden Valley	19	McLean	107	Richland	38	Walsh	107
Burke	9	Grand Forks	250	Mercer	175	Rolette	23	Ward	325
Burlleigh	1142	Grant	30	Morton	380	Sargent	16	Wells	16
Cass	466	Griggs	13	Mountrail	51	Sheridan	6	Williams	148
Cavalier	41	Hettinger	20	Nelson	24	Sioux	27		
Dickey	24	Kidder	29	Oliver	11	Slope	1		

Influenza Surveillance

- Each year we receive information about influenza activity from a variety of sources:
 - Reports of positive influenza from providers
 - ILINet providers
 - Long term care outbreak reports
 - School absenteeism reports
 - Sentinel laboratories

Surveillance: Influenza-like Illness Network

- The national US Outpatient Influenza-like Illness Surveillance Network (ILINet) includes provider participants around the country that report influenza-like illnesses on a weekly basis.
 - ILI = fever of 100F or greater in combination with a cough and/or sore throat, with no other known cause.
 - Providers send weekly reports on the number patients with ILI versus total number of patients by age group.
 - Information provides a general picture of influenza activity at the state and national level.
 - Providers also send specimen samples—used to determine what will go into next year's vaccine.
 - Reporting via fax, email, or online.

Surveillance: Long Term Care Outbreak Reports

- Reports on ILI from long term care (LTC) facilities around the state.
 - All facilities are requested to participate.
 - Report sent when three or more residents or staff members report ILI-illness in a short period of time.
 - Allow the Department of Health to assist in curbing ongoing outbreak, and to recommend or provide specimen testing for this high risk group.
 - Reporting via fax, email, or online.

Surveillance: School absenteeism Reports

- Weekly reports of school absenteeism data from sentinel schools around the state.
- Includes information on absent versus total number of students for each week.
- Increases in absenteeism can signal an increase in seasonal influenza activity.
- Schools also asked to report when a large number of students and staff are reporting ill with respiratory illness.
- Reporting via fax, email, or online.

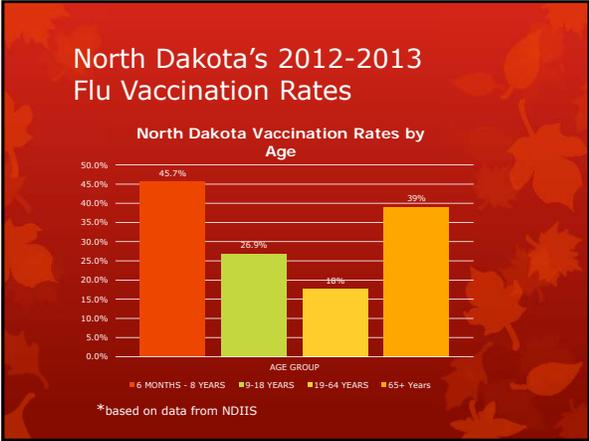
Surveillance: Sentinel Laboratories

- Reports on influenza and respiratory syncytial virus (RSV) testing from participating state laboratories.
- Weekly reports that include the total number of influenza and RSV tests conducted versus the number of these tests that come back positive.
- A higher number of influenza tests being conducted means data on positive versus negative tests is more accurate.
- RSV is common in children and has similar symptoms to flu, contributing to ILI numbers.
- Reporting via fax, email, or online.

Surveillance: You Can Help!

- We are always looking for additional providers, schools and laboratories to participate in our surveillance programs!
- If you are interested in helping, contact:
Jill Baber, Influenza Surveillance Program
Coordinator
jbabber@nd.gov or 701-328-3341
www.ndflu.com
- Surveillance season officially begins September 29th!
- New surveillance partners are welcome any time of year.

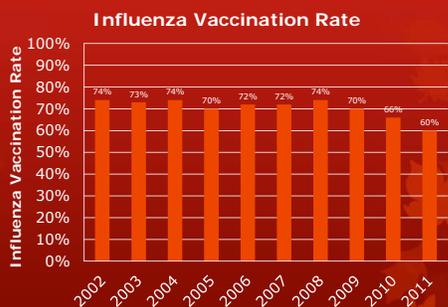
Influenza Vaccination



National Rates of Flu Vaccination-NIS Data

- Children (6 months-17 years)
 - 2012-2013 season: 54.9 ±1.2 %
 - 2011-2012 season: 49.5±0.9 %
- Adults(18 years and older)
 - 2012-2013 season: 35.1±0.8 %
 - 2011-2012 season: 32.0± 0.4 %

North Dakota Historical BRFSS Rates for 65+



Strains included in the 2013-2014 Flu Vaccine

- Trivalent Vaccine:
 - 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
- The Quadrivalent Vaccine also contains:
 - B/Brisbane/60/2008-like

New Vaccines Available This Year

- Live, attenuated influenza vaccine, quadrivalent (LAIV4; FluMist Quadrivalent, MedImmune)
- Inactivated influenza vaccine, quadrivalent (IIV4, Fluarix Quadrivalent, GlaxoSmithKline)
- Inactivated influenza vaccine, quadrivalent (IIV4, Fluzone Quadrivalent, Sanofi Pasteur)
- Cell Culture-based trivalent inactivated influenza vaccine (ccIIV3; Flucelvax, Novartis)
- Recombinant hemagglutinin influenza vaccine (RIV3, FluBlok, Protein Sciences)

New Abbreviations

- o LAIV4: Live attenuated Influenza Vaccine, quadrivalent
- o IIV3: Inactivated Influenza Vaccine, trivalent
- o IIV4: Inactivated Influenza Vaccine, quadrivalent
- o ccIIV3: Cell Culture-based Inactivated Influenza Vaccine, trivalent
- o RIV3: Recombinant hemagglutinin influenza vaccine, trivalent

New Vaccines

- o IIV4- Quadrivalent inactivated vaccine manufactured by both Sanofi Pasteur and GlaxoSmithKline
 - o GlaxoSmithKline:
 - o Fluarix® available in .5 mL Single Dose Prefilled Syringe
 - o Approved for ages ≥3 yrs
 - o Sanofi Pasteur
 - o FLuzone® available in .25mL Single dose pre-filled syringe, .5mL single dose pre-filled syringe, and .5mL single dose vial
 - o Approved for ages 6 months and older
- o LAIV4- Live attenuated Influenza Vaccine-Quadrivalent manufactured by Medimmune
 - o FluMist® available in .2mL prefilled intranasal sprayer
 - o Approved for ages 2-49 years

New Vaccines

- o ccIIV3: Cell Culture-based Inactivated Influenza Vaccine, trivalent manufactured by Novartis
 - o Flucelvax® available in .5mL single-dose prefilled syringe
 - o Approved for ages ≥18 years
 - o Not egg free but theoretically contains less egg than the standard inactivated flu vaccine
 - o Cultured in cells but reference strain is grown in egg embryos
- o RIV3: Recombinant hemagglutinin influenza vaccine, trivalent manufactured by Protein Sciences
 - o FluBlok® available in .5 mL single dose vial
 - o Approved for ages 18-49 years
 - o Egg Free

Intradermal Vaccine

- First available for the 2011-2012 influenza season
- Licensed for ages 18-64 years
- Smaller needle
- .1 mL prefilled microinjection system



High Dose Flu Vaccine

- Intended to elicit a better immune response than the standard flu vaccine in adults over the age of 65
 - Elderly individuals are usually less responsive to vaccination
- Approved for use in those over 65 years of age
- 4x the antigen
- New study results released at the end of August by Sanofi Pasteur
 - According to the study, Fluzone High-Dose is 24.2% more effective in preventing flu in adults over the age of 65 than the standard flu vaccine

Vaccines Offered by the VFC program

- Fluzone (Sanofi Pasteur): available for ages 6 months-35 months and 3 years-18 years
- Fluarix (GSK): available for ages 3 years to 18 years
- Fluvirin (Novartis): available for ages 4 to 18 years
- Afluria (CSL): available for ages 9-18 years
- FluMist (Medimmune): available for ages 2- 18 years

VFC Flu Vaccine Allocations

- North Dakota VFC program receives Flu vaccine in multiple shipments
- Flu vaccine is allocated by the VFC program to providers
- Amount providers receive in Fall based on two things:
 - How much vaccine is given to the VFC program by CDC
 - And
 - How much vaccine was pre-booked by providers in February

Vaccines Recommended For...

- Flu vaccine is recommended for all persons aged 6 months and older
- If flu supply is limited, efforts should be focused on people who:
 - Are aged 6 months- 4 years
 - Are aged 50 years and older
 - Have chronic pulmonary(including asthma), cardiovascular, renal, hepatic, neurologic, hematologic, or metabolic disorders(including diabetes)
 - Are immunosuppressed(including immunosuppression caused by medication or HIV)
 - Are or will be pregnant during the influenza season

Vaccines Recommended For...(continued)

- Are aged 6 months through 18 years and receiving long-term aspirin therapy and who therefore might be at a risk for experiencing Reye syndrome after influenza virus infection
- Are residents of nursing homes and other chronic-care facilities
- Are American Indian or Alaska Natives
- Are morbidly obese (BMI is 40 or greater)
- Are Healthcare Personnel
- Are household contacts and caregivers of children aged younger than 5 years and adults aged 50 years and older with particular emphasis on vaccinating contacts of children aged younger than 6 months
- Are household contacts and caregivers of persons with medical conditions that put them at a higher risk for severe complications from influenza

Flu Vaccine and Healthcare Workers

- Influenza vaccination is recommended for all health care workers by the CDC (Centers for Disease Control), ACIP (Advisory Committee on Immunization Practices), and NFID (National Foundation for Infectious Diseases)
 - Many health care workers begin to spread influenza before they even realize they are sick or continue to work despite illness
 - Up to 50% of health care workers, infected with influenza, are either asymptomatic or only experience mild symptoms

Mandatory Flu Vaccination Policies

- CDC found that The national coverage rate of health care personnel was approximately 63.5% for the 2010-2011 influenza season.
 - For facilities requiring vaccination, the coverage rate was 98.1%
- Some facilities require flu vaccination as a condition of employment
 - According to a survey done earlier this year, flu vaccination is a requirement of employment at about 16% of North Dakota facilities
 - These facilities have noticeably higher vaccination rates among staff
- Sample policies available for those interested in implementing

IAC Honor Roll for Patient Safety

- Immunization Action Coalition (IAC) recognizes facilities that have a influenza vaccination mandate
 - IAC says best way to prevent transmission of influenza to our patients is to mandate vaccination of healthcare workers.
 - North Dakota Facilities on the Honor roll:
 - Altru Health, Grand Forks, ND
 - St. Joseph's Hospital and Health Center, Dickinson, ND
 - Jamestown Regional Medical Center, Jamestown, ND
 - Upper Missouri District Health Unit, Williston, ND
 - Family HealthCare Center, Fargo, ND
- Apply to be on Honor Roll at <http://www.immunize.org/laws/mandates.aspx>

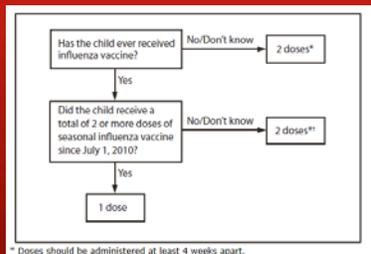
Timing of Vaccination

- CDC recommends that flu vaccine should be administered as soon as it is available
- Studies have shown declining antibodies after vaccination over a few months
- However, declining antibodies have not been correlated with less protection
- If possible, flu vaccine should be offered by October

Flu Vaccine Storage and Handling

- IIV should be stored at 35°F--46°F (2°C--8°C) and should not be frozen. TIV that has been frozen should be discarded.
- LAIV is shipped at 35°F--46°F (2°C--8°C). LAIV should be stored at 35°F--46°F (2°C--8°C) on receipt and can remain at that temperature until the expiration date is reached.
- Vaccine transport guide now available on NDDoH website: www.ndhealth.gov/immunize/Documents/Providers/Forms/Vaccinetransport.pdf

Dosing Schedule for children 6 months to 8 years



Alternative Dosing Schedule for children 6 months to 8 years

In settings where vaccination history from before July 1, 2010, is available...

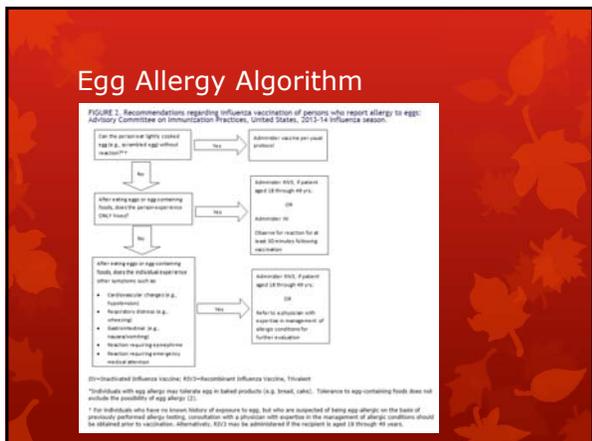
- If a child is known to have received:
 - at least 2 seasonal influenza vaccines during any previous season
- AND*
- at least 1 dose of a 2009(H1N1)-containing vaccine (i.e., either 2010-11, 2011-12 seasonal vaccine, 2012-13 seasonal vaccine or the monovalent 2009[H1N1] vaccine), then the child needs only 1 dose for 2013-14.

Contraindications of Flu Vaccine

- People who have ever had a severe allergic reaction to influenza vaccine.
- People with a history of Guillain-Barré Syndrome (a severe paralytic illness, also called GBS) that occurred after receiving influenza vaccine and who are not at risk for severe illness from influenza should generally not receive vaccine.
- People under 65 years of age should not receive the high-dose flu shot.
- People who are under 18 years old or over 64 years old should not receive the intradermal flu shot.
- People who are moderately or severely ill with or without fever should usually wait until they recover before getting flu vaccine.

Conditions Which Require Physician Consultation

- Severe allergic (e.g. anaphylactic) reaction to eggs
- After eating eggs the person experiences any of the following:
 - Cardiovascular changes
 - Respiratory distress
 - Gastrointestinal
 - Reaction requiring epinephrine
 - Reaction requiring emergency medical attention



- ### Influenza Vaccine VIS
- Required to be given to patient before administering vaccine
 - 2 Influenza Vaccine VISs available
 - Live Flu VIS
 - Inactivated Flu VIS
 - Available on CDC website
 - <http://www.cdc.gov/vaccines/hcp/vis/current-vis.html>

- ### Intervals with Antivirals
- LAIV should not be given to a person on antivirals until 48 hours after the last dose of their medication
 - If antivirals are started within 2 weeks of receiving LAIV, the person should be revaccinated
 - Inactivated vaccine (IIV) may be administered to a person on antivirals or anytime before or after antiviral treatment has been started

Administration Errors

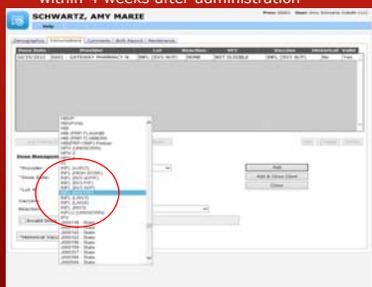
- o Giving FluMist® less than 28 days (not on the same day) before or after a live vaccine
 - o The vaccine given second should be re-administered
- o Administering the intradermal vaccine intramuscularly
 - o This would be considered a valid dose but it is a serious administration error
- o Administering FluMist® within less than 2 weeks of antivirals
 - o If the person is vaccinated less than 2 weeks before or after starting antivirals, he/she must be revaccinated
- o Vaccine leaks out while being injected
 - o It is difficult to determine how much vaccine the person received so they must be revaccinated

Live Vaccines and LAIV

- o LAIV should not be given less than 28 days after another live vaccine
- o Patients should be asked if they have received any vaccines recently
- o Additionally, clinicians should take special care to check if a patient has received live flu vaccine before administering any live vaccines

Screen Shot of Registry and Vaccines Available

- o Flu vaccine must be entered into the registry within 4 weeks after administration



High Risk People and LAIV

- Who should not receive flu mist?
 - Pregnant Women
 - People younger than 2 and older than 49
 - Immunosuppressed persons
 - Those in close contact with severely immunosuppressed persons(require a protective environment)
 - Persons with asthma and other chronic respiratory conditions
 - Anyone with an egg allergy

People Who Can Receive LAIV

- Breast Feeding Women
- Contacts of people who are immunocompromised but do not need to live in a protective environment
- People with mild acute illness who do not have significant nasal congestion

Flu Clinic Finder

- If you provide flu vaccination be sure to add it to the flu clinic locator on ndflu.com website:
<http://www.ndflu.com/FluClinic.aspx>
- Can also find other providers in the area providing flu vaccine

NORTH DAKOTA DEPARTMENT of HEALTH
Influenza

Medical Services & Disease Control

Search for a Flu Vaccine Clinic entered on this site.
Please note: This site contains information provided to the NDDoH by its vaccine providers. This list may not be complete. Please always check with your local health care or health care provider to see if the vaccine is available.

Search: or enter a city

Provider	Contact	Phone	Date/Hours/Appointment	Vaccine Comments
Mid Dakota Clinic - Garrison, ND 2700 2nd Street, Bismarck	Mark Overland	(701) 638-0000	Saturday, October 12 8 am to 5 pm Pre-registration is not required	
Mid Dakota Clinic - Minot, ND 122 Minot Blvd, Minot	Mark Overland	(701) 638-0000	Saturday, October 12 8 am to 5 pm Pre-registration is not required	

Providers: Required to have your clinic added to the database

Client Name:
 Clinic Contact:
 Address:
 City:
 Phone:
 Days of Operation:
 Hours of Operation:
 Appointment:
 Vaccine Comments:

County: (Please Select a County)

Go search for a Flu Vaccine Clinic through www.Blog.gov

Flu Kickoff and Media Campaign

- Flu kickoff will occur on October 3rd, 2013
 - At risk individuals will be vaccinated on television
 - Pregnant woman
 - 1 year old
 - Take place at Bismarck-Burleigh Public Health
- Public Service announcements targeting pregnant mothers and elderly will also air during the month of October
 - Radio and Television
 - GoodHealth TV

Other resources available

- NDDoH will provide resources to encourage flu vaccination
 - Brochures
 - Posters
- Several health providers throughout the state will be providing School vaccination Clinics
 - Will vaccinate children in schools

Post-test

- Post-test
 - Nurses interested in continuing education credit, visit www.ndhealth.gov/immunize/posttest/
 - Successfully complete the five-question post-test to receive your certificate
- Credit for this session available until

5pm Wednesday, September 25, 2013

- This presentation will be posted to our website: www.ndhealth.gov/immunize

Type your question in the chat window to the right

After the presentation, questions may be sent to:

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Immunization Program :
701.328.3386 or toll-free 800.472.2180
