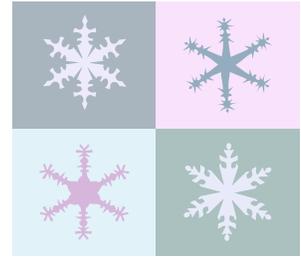


BULLETIN



Antiviral Resistance Emerges in Seasonal Influenza Strain: CDC Announces New Recommendations for Antiviral Use for the Remainder of the Flu Season

On January 14th, 2006, the Centers for Disease Control and Prevention (CDC) announced that, due to the development of drug resistance, clinicians should no longer prescribe the adamantane antivirals, amantadine and rimantadine, to treat or prevent influenza for the remainder of the 2005–2006 influenza season.

As of the January 14th announcement, CDC found that 109 of 120 (91%) influenza A(H3N2) cultures submitted from across the nation during the current influenza season were resistant to adamantanes. This represents a sharp increase in adamantane resistance over the last two influenza seasons: 11% of isolates were resistant during the 2004–2005 season and only 1.9% of isolates were resistant during the 2003–2004 season. Three influenza A(H1N1) viruses have been tested by the CDC this season and all demonstrated susceptibility to these drugs.

It is important to note that all H3 and H1 isolates tested to date by CDC are sensitive to the neuraminidase inhibitors oseltamivir (Tamiflu[®]) and zanamivir (Relenza[®]), the other two antivirals used against influenza.

The Idaho Bureau of Laboratories has identified 48 influenza A(H3) viruses and one influenza B virus since October of 2005. A subset of these has been forwarded to CDC for further characterization, including antiviral susceptibility testing; results are pending.

CDC states that adamantane resistance develops readily with drug use, but neuraminidase inhibitor resistance appears much less likely to arise with antiviral usage. CDC states that amantadine-resistant viruses are cross-resistant to rimantadine and vice versa but that virulence and transmissibility do not appear altered.

Adamantane Derivatives (AD)

- Amantadine and Rimantadine
- Inhibits influenza A viral replication only, not influenza B
- **AD resistance found in A(H3N2)**
- Discontinue use this season

Neuraminidase Inhibitors (NI)

- Oseltamivir (Tamiflu[®]) and zanamivir (Relenza[®])
- Inhibits influenza A and B release from infected cells
- A(H3N2) sensitive to NI.
- Prescribe for prophylaxis (oseltamivir) or treatment (oseltamivir and zanamivir) when indicated.

Influenza vaccination remains the primary method for preventing influenza and its severe complications. Should antivirals be indicated during this flu season, CDC recommends Tamiflu[®] or Relenza[®] be prescribed for the treatment or prevention of influenza.

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The new antiviral use recommendations are explained further in the January 17th MMWR: *High levels of Adamantane Resistance Among Influenza A(H3N2) Viruses and Interim Guidelines for Use of Antiviral Agents—United States, 2005-2006 Influenza Season.*

MMWR Dispatch, Vol 55 /January 17th, 2006
http://www.cdc.gov/mmwr/mmwr_dispatch.html

CDC's influenza web site <http://www.cdc.gov/flu/> has numerous updated references, including antiviral indications, dosages, and potential adverse reactions.

If you did not receive a Health Alert on this subject through the Health Alert Network and you are interested in receiving such Health Alerts, please contact your local public health district to sign up for the Health Alert Network.

Reporting Adverse Events Associated with Drugs or Vaccines

Drugs, biologics, medical devices, or dietary supplements



Health care professionals and consumers can report serious adverse events, product quality problems, or product use errors that they suspect are associated with the use of a Food and Drug Administration (FDA)-regulated drug, biologic, medical device, or dietary supplement to the FDA through MedWatch. The FDA relies on voluntary reporting of these events to maintain safety surveillance of all FDA-regulated products. Your report may be the critical action that prompts a modification in use or design of the product, improves the safety profile of the drug or device and leads to increased patient safety.

There are three ways that health care professionals and consumers may submit voluntary reports to MedWatch:

- 1) Submit the voluntary form 3500 online at the MedWatch web site <http://www.fda.gov/medwatch/>;

- 2) Download a copy of the voluntary form 3500 from the MedWatch web site and either fax it to MedWatch at 1-800-FDA-0178 or mail it back using the postage-paid addressed form; or
- 3) Call MedWatch at 1-800-FDA-1088 to report by telephone.

Forms for mandatory reporting of events that occur during IND clinical trials or other clinical studies are available at <http://www.fda.gov/medwatch/getforms.htm>

Vaccines

The Vaccine Adverse Event Reporting System (VAERS) is a cooperative program for vaccine safety by the Centers for Disease Control and Prevention and the FDA.



VAERS is a post-marketing safety surveillance program, collecting information about adverse events that occur after the administration of U.S.-licensed vaccines.

The VAERS web site <http://vaers.hhs.gov/> provides a nationwide mechanism by which adverse events following immunization may be reported, analyzed, and made available to the public. The VAERS web site also provides a vehicle for disseminating vaccine safety-related information to parents/guardians, healthcare providers, vaccine manufacturers, state vaccine programs, and other constituencies.

VAERS encourages reporting of any clinically significant adverse event that occurs after the administration of any vaccine licensed in the United States. You should report clinically significant adverse events even if you are unsure whether a vaccine caused the event. The National Childhood Vaccine Injury Act (NCVIA) requires health care providers to report: (1) any event listed by the vaccine manufacturer as a contraindication to subsequent doses of the vaccine, and (2) any event listed in the Reportable Events Table that occurs within the specified time period

after vaccination. A copy of the Reportable Events Table can be obtained by calling VAERS at 1-800-822-7967 or downloading it from <http://vaers.hhs.gov/pubs.htm>.

There are two ways that health care providers and consumers may submit reports to VAERS:

- 1) Submit VAERS report online via secure web site accessed through <http://vaers.hhs.gov/>; or
- 2) Submit VAERS reporting form by mail to: Vaccine Adverse Event Reporting System P.O. Box 1100 Rockville, MD 20849-1100
(Note: Providers who receive VAERS report forms from the IDHW Immunization Program are welcome to continue mailing forms to the Immunization Program).

A copy of the VAERS reporting form and instructions for how to submit it can be obtained by calling toll-free 1-800-822-7967, by toll-free fax at 1-877-721-0366, or via e-mail to info@vaers.org.

Severe or unusual reactions to any immunization must be reported to the local Public Health District or the Idaho Department of Health and Welfare within one working day after diagnosis (IDAPA 16, Title 02, Chapter 10, "Rules and Regulations Governing Idaho Reportable Diseases").

Idaho Newborn Screening

Idaho contracts with the Oregon Public Health Laboratory to test newborns for more than 30 metabolic and endocrine disorders. All tests by tandem mass spectrometry (MS/MS) are run from a single blood spot. Five of the disorders have been reportable in Idaho since 2003 and include biotin deficiency, congenital hypothyroidism, galactosemia, maple syrup urine disease and PKU (see Table 1). The most common conditions detected in 2003–2005 were congenital hypothyroidism, PKU and galactosemia. Congenital hypothyroidism has a nationwide incidence of 1:3,000 births, and can result in

mental retardation and other brain damage if it is not diagnosed and treated early in life. Galactosemia, which appears in approximately 1:60,000 births, can cause sudden infant death if untreated within days. The enzyme deficiency leading to phenylketonuria (PKU) occurs in about 1:10,000-15,000 births, and also may lead to varying degrees of mental retardation.

Only five percent of the cases identified by MS/MS in Idaho were suspected by primary care physicians before results of the screening were known. Although specific conditions are individually rare, Idaho's experience over the past three years suggests that as many as one in 700 newborns will have a disorder (reportable or not) that can be identified by MS/MS screening, translating to approximately 30 babies each year whose lives could be saved or improved by early testing.

Additional information about newborn screening in Idaho can be obtained from the Children's Special Health Program at 208-334-5962.

Conditions	2003	2004	2005*
Biotin Deficiency	0	1	0
Congenital Hypothyroidism	10	11	13
Galactosemia	1	2	0
Maple Syrup Urine Disease	0	0	1
PKU	3	4	0
*2005 data is provisional			



Next issue:

- New pertussis vaccines for adolescents and adults.
- Short survey to provide feedback on the content of the Idaho Disease Bulletin.

Idaho Disease Bulletin
*Office of Epidemiology and
Food Protection*
Idaho Department of Health and Welfare
P. O. Box 83720
450 W. State St., 4th Floor
Boise, ID 83720-0036
<http://www.epi.idaho.gov>
Editors

Christine G. Hahn, MD
State Epidemiologist

Leslie Tengelsen, PhD, DVM
Deputy State Epidemiologist

Kris Carter, DVM, MPVM
Career Epidemiology Field Officer

ROUTINE PHYSICIAN 24-HOUR DISEASE REPORTING LINE: 1-800-632-5927
EMERGENCY PHYSICIAN 24-HOUR REPORTING LINE: 1-800-632-8000

Idaho Disease
BULLETIN
Idaho Department of Health and Welfare
Division of Health
P. O. Box 83720
Boise, ID 83720-0036

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