



This is an official
CDC Health Advisory

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**Recommendations for Early Empiric Antiviral Treatment in
Persons with Suspected Influenza who are at Increased Risk of
Developing Severe Disease**

Summary of Recommendations: *When treatment of influenza is indicated in a patient with suspected influenza, health care providers should initiate empiric antiviral treatment as soon as possible. Waiting for laboratory confirmation of influenza to begin treatment with antiviral drugs is not necessary. Patients with a negative rapid influenza diagnostic test should be considered for treatment if clinically indicated because a negative rapid influenza test result does not rule out influenza virus infection. The sensitivity of rapid influenza diagnostic tests for 2009 H1N1 virus can range from 10% to 70%, indicating that false negative results occur frequently.*

Situation

The 2009 pandemic H1N1 influenza virus continues to be the dominant influenza virus in circulation in the U.S. The benefit of antiviral treatment is greatest when it is initiated as early as possible in the clinical course. Several recent reports have indicated two problems related to antiviral treatment: (1) some patients with suspected influenza who are at higher risk of developing severe complications, including hospitalized patients, were not treated at all with antiviral medications because of a negative rapid influenza diagnostic test result and (2) initiation of treatment was delayed for some patients with suspected influenza who are at higher risk of developing severe complications, including hospitalized patients, because clinicians were waiting for results of real-time reverse transcriptase-polymerase chain reaction (rRT-PCR) assay.

Who is prioritized for treatment with influenza antiviral drugs?

Most healthy persons (i.e., those without a condition which puts them at higher risk for complications) who develop an illness consistent with uncomplicated influenza do not need to be treated with antiviral medications and will recover without complications. However, clinical judgment should be the ultimate guide in making antiviral treatment decisions for ill persons who are not at higher risk for complications from influenza.

Early empiric treatment with oseltamivir or zanamivir is recommended for all persons with suspected or confirmed influenza requiring hospitalization. Prompt empiric outpatient antiviral therapy is also recommended for persons with suspected influenza who have symptoms of lower respiratory tract illness or clinical deterioration regardless of previous health or age.

Early empiric treatment should be considered for persons with suspected or confirmed influenza who are at higher risk for complications, even if not hospitalized, including:

- Children younger than 2 years old
- Adults 65 years and older
- Pregnant women
- Persons with the following conditions:
 - Chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological (including sickle cell disease), or metabolic disorders (including diabetes mellitus);
 - Disorders that can compromise respiratory function or the handling of respiratory secretions or that can increase the risk for aspiration (e.g., cognitive dysfunction, spinal cord injuries, seizure disorders, or other neuromuscular disorders)
 - Immunosuppression, including that caused by medications or by HIV;
 - Persons younger than 19 years of age who are receiving long-term aspirin therapy, because of an increased risk for Reye syndrome.

When should health care providers start treatment with antiviral drugs?

Once the decision to administer antiviral treatment is made, oseltamivir or zanamivir should be initiated as soon as possible. Evidence for benefit from antiviral treatment in studies of seasonal influenza is strongest when treatment is started within 48 hours of illness onset. However, some studies of oseltamivir treatment of hospitalized patients with seasonal influenza have indicated benefit, including reductions in mortality or duration of hospitalization, even for patients whose treatment was started more than 48 hours after illness onset.

When treatment is indicated, **health care providers should not wait for laboratory confirmation of influenza to begin oseltamivir or zanamivir treatment of patients with suspected 2009 pandemic H1N1 influenza virus infection. *Patients with a negative rapid influenza diagnostic test should be considered for treatment if clinically indicated* because a negative result does not rule out influenza virus infection.** The sensitivity of rapid influenza diagnostic tests to detect 2009 H1N1 virus in respiratory specimens ranges from 10% to 70%, and therefore false negative results occur frequently. Similarly, false negative results can also occur with immunofluorescence assays.

What actions should health care providers take when waiting for influenza test results?

Health care providers should empirically treat persons with suspected influenza illness who are at increased risk for complications if clinically indicated while influenza test results are pending. Antiviral treatment is most effective when administered as early as possible in the course of illness. The rRT-PCR tests are the most sensitive and specific influenza diagnostic tests, but they may not be readily available, obtaining test results may take one to several days, and test performance depends on the individual rRT-PCR assay. Antiviral treatment should not be delayed until rRT-PCR test results are available.

References for additional information

Updated Interim Recommendations for the Use of Antiviral Medications in the Treatment and Prevention of Influenza for the 2009-2010 Season:

- www.cdc.gov/H1N1flu/recommendations.htm

Interim Recommendations for Clinical Use of Influenza Diagnostic Tests During the 2009-10 Influenza Season:

- www.cdc.gov/h1n1flu/guidance/diagnostic_tests.htm

Questions & Answers: Antiviral Drugs, 2009-2010 Flu Season:

- www.cdc.gov/h1n1flu/antiviral.htm

Influenza Diagnostic Testing:

- www.cdc.gov/h1n1flu/diagnostic_testing_clinicians_qa.htm

Updated Interim Recommendations for Obstetric Health Care Providers Related to Use of Antiviral Medications in the Treatment and Prevention of Influenza for the 2009-2010 Season:

- www.cdc.gov/H1N1flu/pregnancy/antiviral_messages.htm

Antiviral Drugs: Summary of Side Effects:

- www.cdc.gov/flu/protect/antiviral/sideeffects.htm

General information for the public on antiviral drugs is available in "2009 H1N1 and Seasonal Flu: What You Should Know About Flu Antiviral Drugs" at:

- www.cdc.gov/H1N1flu/antivirals/geninfo.htm.

Downloadable brochures and informational flyers, including one on antiviral drugs, are available at

- www.cdc.gov/h1n1flu/flyers.htm.

For the FDA page on antiviral influenza drugs:

- www.fda.gov/Drugs/DrugSafety/InformationbyDrugClass/ucm100228.htm

DHEC contact information for reportable diseases and reporting requirements

Reporting of outbreaks/clusters of cases of influenza (both seasonal and novel H1N1), aggregate positive influenza rapid tests, positive virus cultures for influenza and influenza deaths are consistent with South Carolina Law requiring the reporting of diseases and conditions to your state or local public health department. (State Law # 44-29-10 and Regulation # 61-20) as per the DHEC 2009 List of Reportable Conditions available at: <http://www.scdhec.gov/administration/library/CR-009025.pdf>

Federal HIPAA legislation allows disclosure of protected health information, without consent of the individual, to public health authorities to collect and receive such information for the purpose of preventing or controlling disease. (HIPAA 45 CFR §164.512).

Regional Public Health Offices – 2009

Mail or call reports to the Epidemiology Office in each Public Health Region.

Region 1

Anderson, Oconee

220 McGee Road
Anderson, SC 29625
Phone: (864) 260-4358
Fax: (864) 260-5623
Nights / Weekends: 1-866-298-4442

Abbeville, Edgefield, Greenwood, Laurens, McCormick, Saluda

1736 S. Main Street
Greenwood, SC 29646
Phone: 1-888-218-5475
Fax: (864) 942-3690
Nights / Weekends: 1-800-420-1915

Region 2

Greenville, Pickens

PO Box 2507
200 University Ridge
Greenville, SC 29602-2507
Phone: (864) 282-4139
Fax: (864) 282-4373
Nights / Weekends: 1-800-993-1186

Cherokee, Spartanburg, Union

PO Box 4217
151 E. Wood Street
Spartanburg, SC 29305-4217
Phone: (864) 596-2227, x- 210
Fax: (864) 596-3443
Nights / Weekends: 1-800-993-1186

Region 3

Chester, Lancaster, York

PO Box 817
1833 Pageland Highway
Lancaster, SC 29720
Phone: (803) 286-9948
Fax: (803) 286-5418
Nights / Weekends: 1-866-867-3886

Region 3 (continued)

Fairfield, Lexington, Newberry, Richland

2000 Hampton Street
Columbia, SC 29204
Phone: (803) 576-2749
Fax: (803) 576-2993
Nights / Weekends: 1-888-554-9915

Region 4

Clarendon, Kershaw, Lee, Sumter

PO Box 1628
105 North Magnolia Street
Sumter, SC 29150
Phone: (803) 773-5511
Fax: (803) 775-9941
Nights/Weekends: 1-877-831-4647

Chesterfield, Darlington, Dillon, Florence, Marlboro, Marion

145 E. Cheves Street
Florence, SC 29506
Phone: (843) 661-4830
Fax: (843) 661-4859
Nights / Weekends: (843) 660-8145

Region 5

Bamberg, Calhoun, Orangeburg

PO Box 1126
1550 Carolina Avenue
Orangeburg, SC 29116
Phone: (803) 533-7199
Fax: (803) 533-7134
Nights / Weekends: (803) 954-8513

Aiken, Allendale, Barnwell

1680 Richland Avenue, W. Suite 40
Aiken, SC 29801
Phone: (803) 642-1618
Fax: (803) 643-8386
Nights / Weekends: (803) 827-8668 or
1-800-614-1519

Region 6

Georgetown, Horry, Williamsburg

1931 Industrial Park Road
Conway, SC 29526-5482
Phone: (843) 915-8804
Fax: (843) 365-0085
Nights / Weekends: (843) 381-6710

Region 7

Berkeley, Charleston, Dorchester

4050 Bridge View Drive, Suite 600
N. Charleston, SC 29405
Phone: (843) 953-0060
Fax: (843) 953-0051
Nights / Weekends: (843) 219-8470

Region 8

Beaufort, Colleton, Hampton, Jasper

219 S. Lemacks Street
Walterboro, SC 29488
Phone: (843) 525-5910
Fax: (843) 549-6845
Nights / Weekends: 1-800-614-4698

DHEC Bureau of Disease Control

Division of Acute Disease Epidemiology

1751 Calhoun Street
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Phone: (803) 898-0861
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Nights / Weekends: 1-888-847-0902



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Categories of Health Alert messages:

Health Alert conveys the highest level of importance; warrants immediate action or attention.

Health Advisory provides important information for a specific incident or situation; may not require immediate action.

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