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To: Local Health Departments
Infection Preventionists
Division of Quality Assurance
Wisconsin LTC D.O.N. Association
Wisconsin LTC Medical Directors Association
Wisconsin Healthcare Association
Leading Age-Wisconsin
Wisconsin Assisted Living Association

From: Thomas Haupt M.S.
Wisconsin Division of Public Health

RE: Reporting, prevention and control of acute respiratory illness outbreaks in long-term care facilities

This memo is intended as guidance to medical and administrative staff of long term care facilities (LTCF) in Wisconsin. It is left to the discretion of facility staff whether to use this guidance wholly or in part, or to use recommendations from another source to prevent and control respiratory illness in their facility. Guidance marked as "**required**" is mandatory per Wisconsin State Statute 252 or Wisconsin Administrative Code DHS 145.

1.0 REPORTING

1.1 Reporting single cases

LTCF are **required** by State Statute 252 to report single cases of notifiable disease to their local health department. Category I diseases **require** immediate notification by telephone; Category II diseases are **required** to be reported within 72 hours upon recognition of a case or suspected case either by entering the data into the Wisconsin Electronic Disease Surveillance System (WEDSS), or completing an Acute and Communicable Disease Case Report (DPH F-44151) and mailing it to the address on the form. A complete list of notifiable diseases and conditions can be found in Wisconsin Administrative Code DHS 145 Appendix A or at http://dhs.wisconsin.gov/communicable/diseasereporting/index.htm

1.2 Reporting outbreaks

Any suspected or confirmed outbreak of any communicable disease within a LTCF is **required** by State Statute 252 to be reported immediately by telephone to the local health department.

2.0 DEFINITION OF TERMS USED

2.1 Acute respiratory illness (ARI) is defined as illness characterized by any two (2) of the following:

- Fever*
- Cough (new or worsening that is productive or non-productive)
- Rhinorrhea (runny nose) or nasal congestion
- Sore throat

- Myalgia (muscle aches) greater than the resident's norm

2.11 *Fever may be difficult to determine among elderly residents. Therefore, the definition of fever used for ARI may be defined as temperature two degrees (2°) Fahrenheit above the established baseline for that resident.

2.2 Pneumonia is defined as radiographic evidence of **new** or **increased** pulmonary infiltrates, usually accompanied by fever. It is strongly recommended that all suspect cases of clinically-diagnosed pneumonia be followed with radiographic testing.

2.3 A **respiratory disease outbreak** in a LTCF is defined by CDC and DPH as three or more residents from the same unit with illness onsets within 72 hours of each other and who have:

- pneumonia, or
- ARI, or
- laboratory-confirmed viral or bacterial infection (including influenza)

3.0 PREVENTION AND CONTROL OF RESPIRATORY OUTBREAKS IN LTCF

3.1 Influenza Vaccine:

Influenza is the only respiratory virus for which there is a vaccine. The Centers for disease Control and Prevention (CDC) has projected that a plentiful supply of influenza vaccine will be available in the United States during the 2012-13 influenza season. No delays in delivery have been identified or are currently anticipated. CDC and the Wisconsin Division of Public Health (DPH) recommend that **all residents and employees** of LTCF receive annual influenza vaccination as soon as influenza vaccine becomes available.

3.2 Laboratory Testing

When an outbreak of acute respiratory disease is suspected LTC staff should consider collecting nasopharyngeal swabs (preferred) or oropharyngeal swabs from three ill residents and, with DPH approval, send specimens to the Wisconsin State Laboratory of Hygiene (WSLH) for influenza testing (fee exempt).

3.2.1 Facilities may choose to have clinical specimens tested at a laboratory other than the WSLH, however, fee exempt testing cannot be offered for tests performed at these laboratories.

3.2.2 Because of the possibility of false positive results when using rapid influenza tests, particularly when testing does not occur during the influenza season, confirmatory testing using RT-PCR or viral culture should be performed.

3.2.3 With DPH approval the specimens could also be tested for other respiratory viruses.

3.2.4 Results will be sent to DPH and to the specimen submitter.

3.2.5 If test results confirm influenza within a facility no further testing will be performed unless the resident has an atypical presentation of illness or is not responding to treatment.

3.2.6 A negative test result does not rule out infectiousness nor does it rule out the existence of an outbreak.

3.3 Antiviral Prophylaxis and Treatment

3.3.1 Influenza antiviral prophylaxis may prevent further spread of infection and illness during outbreaks of influenza in LTCF.

3.3.2 When cases of influenza have been confirmed, antiviral prophylaxis should be offered: to all residents regardless of vaccination status, to all unvaccinated employees, and to those employees vaccinated less than two weeks before the cases were identified.

3.3.3 If exposure is limited to a specific wing or residential area, then antiviral prophylaxis can be limited to residents and staff in those areas.

3.3.4 Both oseltamivir (Tamiflu®) and zanamivir (Relenza®) can be used for antiviral prophylaxis to prevent influenza A and B infection.

3.3.5 Once initiated, antiviral prophylaxis should continue for a minimum of two weeks, and one week after the onset of symptoms in the last confirmed or highly suspected case. http://www.cdc.gov/flu/professionals/antivirals/

3.3.6 Within 48 hours of the onset of illness, treat persons with confirmed or **s**uspect cases of influenza among residents and staff with oseltamivir (Tamiflu®) or zanamivir (Relenza®) to reduce the severity and shorten the duration of the illness.

3.3.7 At the discretion of a clinician, treatment with oseltamivir (Tamiflu®) or zanamivir (Relenza®) can be initiated more than 48 hours after the onset of illness.

3.3.8 Because of identified resistance, adamantanes should **not** be used to treat or prevent suspect or probable cases of influenza A. Both seasonal H1N1 and H3N2 viruses are resistant to adamantanes. Adamantanes (amantadine, rimantadine; Symadine®, Symmetrel®, Flumadine®) are not effective against influenza B.

4.0 INFECTION CONTROL

Caregivers should adhere to the appropriate precautions when in the presence of a resident with suspected or confirmed respiratory illness.

4.1 Droplet Precautions are intended to prevent transmission of pathogens spread through close respiratory or mucous membrane contact with respiratory secretions. In contrast to contact transmission, respiratory droplets carrying infectious pathogens transmit pathogens when they travel directly from the respiratory tract of the infectious individual to susceptible mucosal surfaces of the recipient, generally over short distances

4.1.1 Healthcare personnel should wear a mask (a respirator is not necessary) for close contact with an infectious patient; the mask is generally donned upon room entry.

4.1.2 Patients on Droplet Precautions who must be transported outside of the room should wear a mask if tolerated and practice Respiratory Hygiene/Cough Etiquette.

4.2 Contact Precautions apply when the presence of discharges from the body suggest an increased potential for extensive environmental contamination and risk of transmission.

4.2.1 Healthcare staff should wear a gown and gloves for all interactions that may involve contact with the resident or potentially contaminated areas in the environment.

4.2.2 Donning PPE upon room entry and discarding before exiting the patient room is done to contain pathogens implicated in transmission through environmental contamination

4.3 Recommended Precautions for Common Respiratory Viruses (CDC)

	Droplet Precautions	Contact Precautions
Influenza	√	
RSV		√
Parainfluenza		√
Rhino/Enterovirus	√	
Coronavirus		√
Human Metapneumovirus		√
Adenovirus	√	√

4.4 Duration of Contact and Droplet Precautions

4.4.1 When a resident has confirmed or suspect influenza, the resident should remain on droplet precautions for seven days or until 24 hours after the resolution of fever and respiratory symptoms (see Section 4.4.3 below), whichever is longer, after the onset of their illness.

4.4.2 For other respiratory illnesses the resident should remain on appropriate precautions for the duration of illness, defined as 24 hours after resolution of fever and respiratory symptoms (see Section 4.4.3 below).

4.4.3 Criteria for determining ARI among staff or residents should focus on whether cough is a new symptom or a worsening symptom. For discontinuation of droplet or contact precautions, exclude cough as a criterion unless the cough produces purulent sputum. In many cases a non-infectious post viral cough may continue for several weeks following resolution of other respiratory symptoms.

4.5 Resident Room Assignments During an Outbreak

4.5.1 In general, an ill resident should be in a private room if possible.

4.5.2 Decisions regarding resident placement should be considered by medical and administrative staff on a case-by-case basis after considering infection risks to other residents in the room and available alternatives.

4.5.3 In determining resident placement, consider balancing infection risks to other patients in the room, the presence of risk factors that increase the likelihood of transmission within the facility, and the potential adverse psychological impact on the infected resident.

4.5.4 When a single-patient room is not available, consultation with infection control personnel is recommended to assess risks associated with other patient placement options (e.g., cohorting, keeping the patient with an existing roommate).

4.5.5 Spatial separation of three feet or more and drawing the curtain between patient beds is especially important for residents in multi-bed rooms.

4.5.6 The LTCF should consider allowing a resident with a cough to leave his or her room provided s/he uses a surgical mask.

4.6 Restriction of Visitors

4.6.1 Upon recognition of a confirmed or suspected outbreak of acute respiratory illness the facility may consider posting a sign on each entrance informing visitors of the outbreak.

4.6.2 Ill visitors can be restricted but not denied from entering the facility. It is recommended by CDC and the DPH that if an ill visitor must enter the facility (example being end-of-life situations), the facility should provide the visitor with a surgical mask.

4.6.3 The facility should not restrict asymptomatic visitors from their facility.

4.7 Restriction of New Admissions

4.7.1 Upon recognition of a confirmed or suspected outbreak of respiratory illness, the facility may consider restricting new admissions to the facility.

4.7.2 If the outbreak is confined to a specific unit, wing or floor, the facility may consider allowing new admissions to other units, wings or floors not affected by the outbreak.

4.7.3 Restriction of new admissions to the facility or the affected unit, wing or floor may be considered **until one week** after the illness onset of the last confirmed or suspected case.

4.7.4 The facility may consider the readmission of current residents (for example, those returning from a hospital stay) provided upon return to the facility the appropriate infection control measures are implemented to protect the residents' health.

4.8 Staff Exclusion

4.8.1 Staff should be excluded from work until at least 24 hours after they no longer have a fever (without the use of fever-reducing medicines such as acetaminophen or ibuprofen).

4.8.2 If symptoms such as cough and sneezing are still present, staff should wear a surgical mask during patient care activities.

References

Infection Control Guidelines (CDC)
http://www.cdc.gov/flu/professionals/infectioncontrol/index.htm

DPH/ Bureau of Communicable Diseases and Emergency Response (BCDER)Websites
http://www.dhs.wisconsin.gov/immunization/index.htm (immunization)
http://www.dhs.wisconsin.gov/communicable/Influenza/Surveillance.htm (surveillance)

If you have any questions, comments, or concerns please notify Thomas Haupt, Influenza Surveillance Coordinator at 608-266-5326, or by e-mail at thomas.haupt@wisconsin.gov or call the Bureau of Communicable Diseases and Emergency Response at (608) 267-9003.

SHIPMENT OF VIRAL SURVEILLANCE SPECIMENS VIA DUNHAM EXPRESS TO THE STATE LABORATORY OF HYGIENE

SPECIMEN PACKAGING (WSLH KIT # 18 OR EQUIVALENT):

- **Triple package as "Biological substance, Category B UN 3373."**
- Securely tape the cap of the specimen container, wrap specimen with absorbent material; place the specimen vial into a biohazard bag; place the completed requisition form into the outer pocket of the bag.
- Place the bagged specimen and form in the Styrofoam mailer with a frozen kool-pak.
- Replace lid on the Styrofoam box; close and securely tape the cardboard box shut.
- Attach the WSLH address label to the package:
  State Lab - Virology
  465 Henry Mall
  Madison, WI 53706
- Attach the "*Biological substance, Category B / UN 3373*" label to the package.
- Attach your *return address* label; include the *name and telephone number* of the person who knows the content of the package (requirement) with the return address.

SHIPPING ARRANGEMENTS:

- The WSLH has a contract with Dunham Express for shipment of specimens to the WSLH, with charges billed to the WSLH. You are not required to ship via Dunham Express unless you wish to have the transport charges billed to the WSLH.
- Specimens will be picked up during regular working hours, but you must confirm the time with the Dunham Express office in your area.
- Specimens will be delivered to the WSLH the following day, except Fridays. If you must ship on Fridays or on the day before a holiday, include an extra coolant.
- All package preparation should be completed before the courier arrives.
- Contact the Dunham Express office in your area (see list below);

Appleton area:	Call	920-722-6360 or 1-800-236-7128
Eau Claire area:	Call	715-834-3200 or 1-800-236-7129
LaCrosse area:	Call	608-779-4588
Madison area:	Call	608- 242-1000
Milwaukee area:	Call	414-435-0002 or 1-800-236-7126
Niagara area:	Call	715-251-1909 or 1-800-298-1909
Wausau area:	Call	715-848-4882 or 1-800-298-4882

- Give the office the following information:
  The State Lab-Virology account number: 7274
  Account name: State Lab - Virology
  Your name and phone number
  Your pickup address, including other location information (e.g., room number)
  The destination: State Lab - Virology, 465 Henry Mall, Madison, WI 53706
  Shipment description, if asked: Viral specimens for overnight delivery

WISCONSIN DIVISION OF PUBLIC HEALTH
RECOMMENDATIONS FOR THE PREVENTION AND CONTROL OF RESPIRATORY OUTBREAKS IN LONG-TERM CARE FACILITIES

Monitor all residents and staff for signs and symptoms consistent with acute respiratory illness (ARI**) Section 2.1**

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If the definition of an outbreak of ARI is met, notify public health officials the facility medical director and administration and enhance surveillance for ARI among residents and staff. **Section 2.3**

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Test residents/staff who present with ARI by submitting respiratory specimens to a laboratory equipped to test for influenza. **Section 3.2**

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One or more test results are positive for influenza **Section 3.2**

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Within 48 hours of the onset of illness **treat** confirmed and **s**uspect cases among residents and staff with oseltamivir (Tamiflu®) or zanamivir (Relenza®) to reduce the severity and shorten the duration of the illness. **Section 3.3**

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Notify facility medical staff or residents personal clinician. Consider providing antiviral chemoprophylaxis to:

- ALL unvaccinated employees and those employees vaccinated for <2 weeks, and
- ALL residents regardless of vaccination status, unless exposure is limited to a specific unit, wing or floor.

Section 3.3

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One or more test results are positive for a pathogen other than influenza or all test results are negative **Section 3.2**

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Facility medical staff may consider restricting new admissions to the facility or to the area where the confirmed resident(s) reside **until one week** after the illness onset of the last confirmed or suspected case. **Section 4.7**

For additional information, contact the Bureau of Communicable Diseases and Emergency Response at 608-267-9003
November, 2012