

underlying medical conditions (including asthma) are being urged to get vaccinated and to seek early medical attention for symptoms of influenza-like illness (ILI).

- Many children (and some adults) are presenting with vomiting and diarrhea in addition to respiratory symptoms. H1N1 should be among the differential diagnoses for people with fever and gastrointestinal symptoms.
- Additional cases of influenza associated encephalitis and a case report of rhabdomyolysis associated with H1N1 have been published.
- In order to limit the strain on emergency rooms across the state, persons with ILI who have symptoms of mild illness and no underlying medical conditions should be discouraged from visiting the emergency room. Instead, they should call their provider with questions or concerns about illness that seems severe or is not responding to symptomatic management at home after several days.
- The CDC is closely tracking all pregnant women with influenza and is requesting that providers contact them directly to report cases of ICU admissions or deaths. All case report forms can be sent to a monitored mailbox at CDC (ReportSickMom@cdc.gov) or secure fax line (404-248-4094).
 - In addition, CDC has established a support line (404-368-2133) that will be staffed 24 hours/7 days for the following:
 - To answer questions about process of filling out or submitting the case report forms.
 - To provide clarification on CDC guidance for pregnant women via telephone consultation with board-certified OB/GYN providers.

B) Testing – no updates from prior guidelines. RT-PCR is still recommended for:

- Hospitalized patients with ILI
- Healthcare workers with symptomatic ILI
- Members of a possible outbreak or cluster, as recommended by NH DHHS

C) Antivirals

Peramivir is a new antiviral in the class of neuraminidase inhibitors. It is currently in phase III clinical trials and was approved by the FDA on 10/23/09 via Emergency Use Authorization. Its niche is its IV formulation (unlike oseltamivir and zanamivir) and it is to be used only for:

- inpatients with suspected or confirmed influenza (pediatric/adult)
AND
- patients not responding to oseltamivir or zanamivir or in need of intravenous formulation.

Peramivir is not expected to have activity in the setting of oseltamivir resistant virus (which remains rare, 14 reported cases in the US to date.) Of note, pediatric patients, pregnant women and breastfeeding women have not yet received this drug in trials. Dosing is 600 mg intravenous daily for 5 or 10 days and common side effects are gastrointestinal (nausea,

vomiting, diarrhea) and hematologic (neutropenia). New Hampshire physicians have already received peramivir from the CDC and we continue to receive reports of shipment.

Peramivir drug requests can be made directly by providers at the CDC website:
<http://emergency.cdc.gov/h1n1antivirals/>

Although antivirals are most effective when started in the initial 48 hours after symptom onset, they should be strongly considered for all hospitalized patients with suspected influenza. It is not recommended to wait for laboratory confirmation before starting therapy. Duration of therapy for critically ill patients should probably be continued beyond the five day recommended duration.

In the outpatient arena, antivirals have often been spared for those with underlying conditions, but it is important to note that 40% of children and 20% of adults hospitalized with H1N1 have had no underlying conditions. Early antiviral treatment should be considered for anyone who is at risk of severe disease or seems particularly ill, even in the absence of underlying medical conditions.

Antiviral resistance testing is available for clinicians caring for patients with suspected resistance to neuraminidase inhibitors. Patients must be in the ICU or severely immunocompromised, have confirmed H1N1 infection and have completed five days of antivirals without improvement. Contact the NH State Laboratory or the CDC directly for resistance testing to determine if criteria have been met. (eoclaboratory@cdc.gov)

Antiviral Supply:

- In NH to date, there is no lack of oseltamivir or zanamivir and there is also good national antiviral supply.
- Commercially produced **pediatric oseltamivir suspension** has been difficult to find in some communities. When needed but not available, the CDC recommends that providers discuss the following options with local pharmacists:
 - i. mixing children's oseltamivir capsules with syrup (at home, with pharmacist guidance) or
 - ii. pharmacy compounding of adult oseltamivir tablets into a pediatric liquid formulation
- NH DHHS is finalizing a plan for antiviral network distribution. The goal of the plan is to provide antivirals (oseltamivir and zanamivir) for those who are uninsured or underinsured and cannot afford the medication. This will involve provision of supply from the state cache to local pharmacies and shipment will begin the week of November 9th. Further information will be provided shortly via another Health Alert Network (HAN) message. In the meantime, if you are caring for an outpatient in need of antivirals who cannot afford the medication, please contact NH DHHS at 603-271-4496.

D) H1N1 Vaccination

a. **Safety** – many people in New Hampshire still have concerns about the H1N1 vaccine that may be alleviated with additional information. We recommend that you ask patients about their concerns since your input can be crucial to their acceptance of vaccine (for now, focus on pregnant women and parents of children with medical conditions as outlined below). Some pregnant women have specific concerns about thimerosal preservative in multidose vaccine vials but the CDC and ACOG have been very clear in their strong recommendation that these women are at particular risk of complications from influenza and that they should receive vaccine with or without preservative.

See addendum #2 for administration of H1N1 vaccine with other vaccines.

b. **NH DHHS continues to be in phase I for vaccine distribution (see Addendum #1 below)**. We anticipate moving to phase II (extending vaccine to contacts of infants <6 months old and healthy children 6 months – 4 years old) within the next few weeks, depending on supply. Although we do not encourage a policy of vaccinating healthy individuals in other groups at this time, clinical judgment can and should be used in vaccinating and/or protecting additional at risk patients. If you have additional LAIV H1N1 vaccine in your region that is not moving, you may want to consider using it to vaccinate healthy children (2 and older) who are siblings of children with underlying medical conditions. Vaccination has recently been offered to school nurses and dentists through special clinics that have been set up to reach these healthcare workers.

c. **Vaccine Supply** – From 9/30 to 11/4/09, the CDC shipped 26 million doses of H1N1 vaccine to states nationwide. New Hampshire was shipped 125,000 doses (population based share) during this time and vaccine has been distributed directly to providers and hospitals across our state. The CDC is expecting another 8 million doses to be available for order in the upcoming week and the New Hampshire Immunization Program is working hard to continue to fill orders for those who are registered as vaccine recipients. Supply has been unpredictable thus far and demand for vaccine is very high.

(Of note, 91 million doses of seasonal flu vaccine have been shipped by the manufacturers; companies report about 23 million doses more will be produced. Remember that children from 6 months to 8 years of age being vaccinated for the first time against seasonal influenza need two vaccines separated by at least 28 days.)

d. **Vaccine Formulation** - For planning purposes, incoming vaccine in the next few weeks is shifting to 2/3 inactivated vaccine (mostly multidose vials) and 1/3 nasal spray (live attenuated version). Healthcare workers and others who are eligible for nasal vaccine should be given LAIV since many other target populations are only eligible for inactivated vaccine.

e. **Vaccine Distribution** – In order to facilitate vaccination of the high risk groups in NH, hospitals are being integrated into a regional H1N1 vaccine distribution plan. Providers registered to order H1N1 vaccine will continue to place their orders and report back weekly, as they have been doing. Each hospital has assigned an account manager to facilitate re-distribution

of vaccine to affiliated providers as well as other local providers who order small numbers of vaccine. Starting November 16th, vaccine allocation and dispensing rates will be published on the state website by region.

E) Infection Control

- Remind visitors to facilities that they should not visit hospitalized patients if they are feeling ill. Some facilities may wish to reconsider their visitor policy, particularly to areas where patients are at particular risk of influenza complications (such as labor and delivery units and pediatric intensive care units).
- **N95 masks are to be used for healthcare workers who are performing aerosol generating procedures. (See addendum #3 for specific procedures.)** All other exposures to persons with ILI should be prevented with the use of surgical masks by healthcare workers. Vaccination of health care workers and immediate identification of patients with ILI for appropriate isolation are crucial to preventing ILI spread within hospitals.
- In the setting where healthcare providers are using masks to protect themselves from exposure to H1N1, they should **discard the mask at the end of each patient encounter** and practice hand hygiene (rather than reusing surgical masks or N95s). If the healthcare worker is wearing a mask for their own cough or respiratory symptoms, the mask can be worn until it is wet or soiled.

The **NH DHHS guidelines differ from the CDC guidelines** in a few different places. For the sake of clarity, NH recommendations are listed here:

- H1N1 vaccine prioritization groups are based on ACIP high risk groups but are not identical.
- Recommendation of surgical masks for HCW exposed to ILI in a non aerosol generating situation.

F) Addenda

1. **NH DHHS Vaccine Priority Groups**
2. **Vaccine Coadministration Table**
3. **Healthcare Workers Personal Protective Equipment**
4. **Algorithm - Management of Persons with ILI EDIT**
5. **Algorithm - Management of HCW with/exposed to ILI EDIT**

An algorithm for the **Triage and Treatment of Pregnant Women with ILI** is available from the American College of Obstetricians and Gynecologists at:

<http://www.acog.org/departments/resourceCenter/2009H1N1TriageTreatment.pdf>

Definitions

A **confirmed case** of H1N1 infection is defined as a person with an ILI with laboratory confirmed novel influenza A (H1N1) virus infection by one or more of the following tests:

1. real-time RT-PCR
2. viral culture

A **probable case** of H1N1 infection is defined as a person with ILI who is

- positive for influenza A, but negative for human H1 and H3 by influenza RT-PCR

Incubation period for H1N1 influenza virus infection is 1 to 7 days

Infectious period for H1N1 is defined as 1 day prior to the case's illness onset to 24 hours after fever resolution, without the use of antipyretics. Viral shedding may continue at lower levels after fever has resolved (especially in children).

Healthcare Worker* definition for this document includes nurses, physicians, dentists, respiratory therapists and any other ancillary staff or workers who have direct contact with patients or infectious respiratory material in the settings listed below. It also includes medical emergency-response workers (e.g., paramedics and emergency medical technicians) as well as students and volunteers in facilities with direct patient contact.

Healthcare Worker Settings* include acute care hospitals, long term care facilities, ambulatory care clinics, outpatient surgery clinics, dialysis centers, physician offices and home care agencies.

Close contact or direct patient contact* is defined as coming into close proximity of a person ill with ILI (and/or their respiratory secretions) during the course of caring for or living with them. Although "close" is usually defined with a proximity of 3 feet of the patient, for the purpose of H1N1 infection control, proximity is defined as 6 feet (or within a hospital room). Close contact typically does not include activities such as walking by an infected person or sitting across from a symptomatic patient in a waiting room or office.

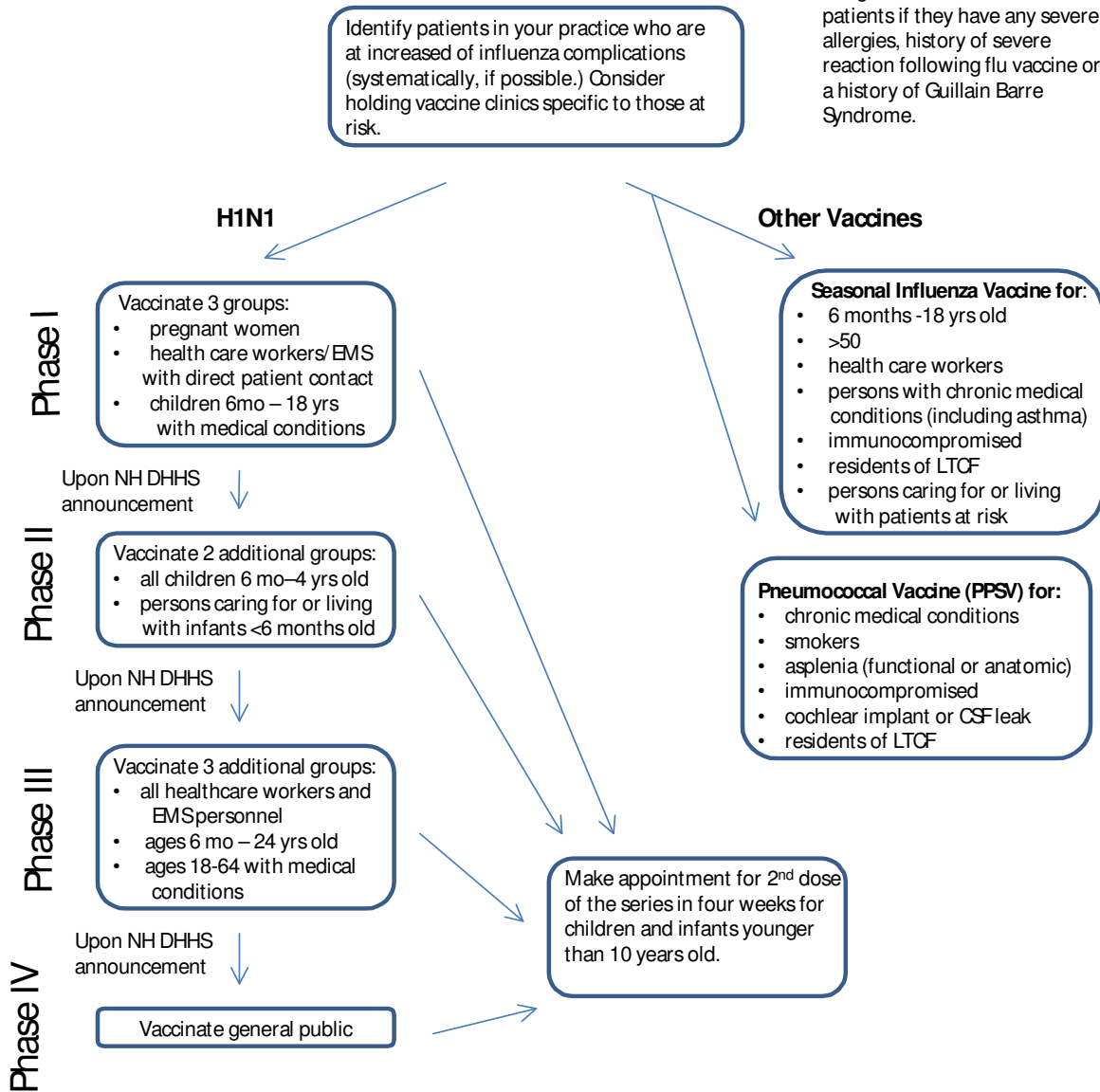
*Many persons who do not fit into these criteria may have some level of patient contact and would benefit from H1N1 vaccine. Given the limited early supply of vaccine, those with direct patient contact as defined above are prioritized, but within the coming weeks, there will be sufficient supply for all health care workers (even those without direct patient contact), followed soon after by everyone who would like to be vaccinated. NH DHHS encourages all eligible persons to get the vaccine for both H1N1 and seasonal influenza this year.

For questions or comments regarding the contents of this message, please contact NH DHHS Communicable Disease Control and Surveillance Section at 603-271-4496 (after hours 1-800-852-3345).

Addendum #1

NH DHHS Vaccine Algorithm*

* Anyone with a life-threatening allergy to eggs or to any other substance in the vaccine should not get it. Providers should ask patients if they have any severe allergies, history of severe reaction following flu vaccine or a history of Guillain Barre Syndrome.



EMS= Emergency Medical Services personnel

Report any adverse events following vaccination to the online monitoring system at www.vaers.hhs.gov

Addendum #2

**Table for Vaccination Administration
 H1N1 vaccine with other vaccines**

		First Vaccine			
		Seasonal inactivated (injection)	Seasonal LAIV (intranasal)	H1N1 Inactivated (injection)	H1N1 LAIV (intranasal)
Second Vaccine	H1N1 Inactivated (injection)	OK to give the same day at different sites or anytime after.*	OK to give the same day or anytime after.	NA	NA
	H1N1 LAIV (intranasal)	OK to give the same day or anytime after.	Separate 2 vaccines by 28 days	NA	NA
	Other Live Vaccine (ie MMR)	OK to give the same day or anytime after.	OK to give the same day or separated by 28 days.	OK to give the same day or anytime after.	OK to give the same day or separated by 28 days.
	Other inactivated vaccine (ie PPSV)	OK to give the same day or anytime after.	OK to give the same day or anytime after.	OK to give the same day or anytime after.	OK to give the same day or anytime after.
	Antiviral medication administration	OK to vaccinate patient on antiviral medication	Do not administer LAIV until 48 hours after stopping antiviral medications. **^	OK to vaccinate patient on antiviral medication	Do not administer LAIV until 48 hours after stopping antiviral medications.***^

* ACIP Use of Influenza A (H1N1) 2009 Monovalent Vaccine. MMWR 28Aug09;58(RR-10):1-8.

** Prevention and Control of Seasonal Influenza with Vaccines. MMWR 31Jul09;58(RR-8):1-52.

*** CDC Antiviral Q+A, 2009-2010 Flu Season (9/23/09)

^ Use of antiviral medications within 14 days after LAIV can reduce immune response to vaccine. If this happens, consider revaccination for influenza after 48 hours off antivirals.

Addendum #3 – HCW Personal Protective Equipment (PPE)

Use of Standard and Expanded Precautions, including Respiratory Protection, for Management of Patients with Suspected or Confirmed H1N1 Influenza

All patients should be evaluated and cared for in a **private room** (whenever possible).
 Room cleaning, laundry, and waste management should all be done using routine procedures.
 The PPE required depends on the likelihood that a procedure or a situation will generate aerosols.
 The following is a list of **common aerosol generating situations** and the required PPE for staff.

Situations That May Generate Aerosols	PPE for Room Entry
Intubation	<ul style="list-style-type: none"> • Single use N95 respirator or PAPR or other equivalent re-usable respirator • Gloves • Eye protection • Gown if spray or splash is likely • Minimize number of people in room • Keep door closed
Extubation	
Open tracheal suctioning	
Bronchoscopy	
Manipulation of ventilator	
Use of nebulized medications (induces cough)	
Routine care of a patient who requires open system ventilator (e.g., BIPAP)	
Situations in which the risk of ventilator disconnection is considered high (e.g., a ventilated patient is agitated)	

The following is a list of situations which are *not* considered to be associated with generation of aerosols and the required PPE for staff.

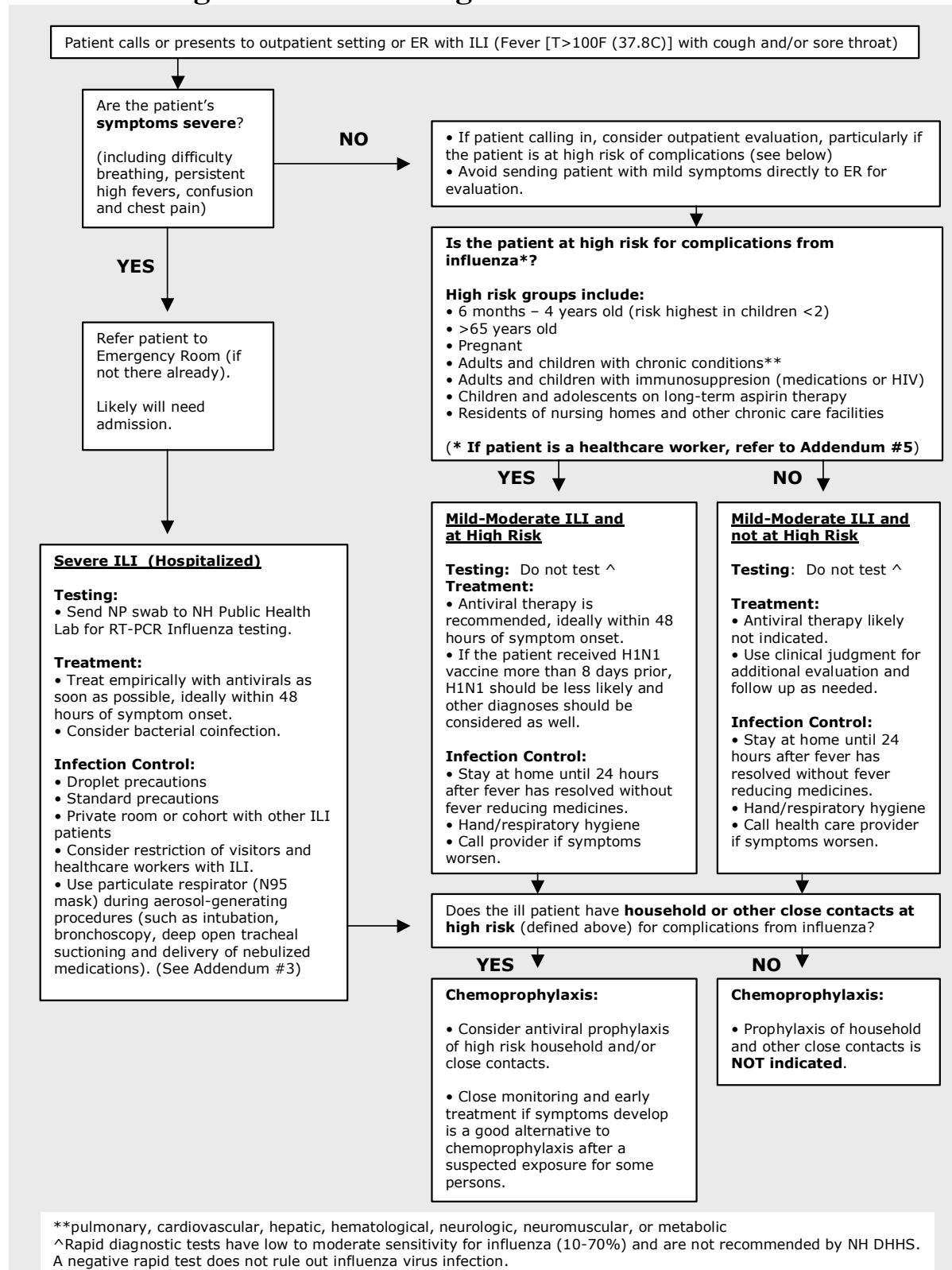
Situations Unlikely to Generate Aerosols	PPE for Room Entry
Routine care of a patient who requires closed system ventilator	<ul style="list-style-type: none"> • Surgical mask* • Gloves, if contact with blood or body fluids is anticipated • Eye protection only if spray or splash is likely • Gown if spray or splash is likely • Minimize number of people in room
Routine care of a non-ventilated patient	
Outpatient evaluation	
Phlebotomy, EKG, other similar tests	
Delivery of food tray	
Transportation of patient **	
Room cleaning, housekeeping	

*Surgical masks are made of material that is less permeable to blood or body fluid splashes than the yellow paper masks which are appropriate for patients, visitors, and staff who have a cough or cold symptoms.

**When outside the room, the patient should wear a yellow paper mask, and then Transportation personnel do not need to wear a surgical mask

Addendum #4

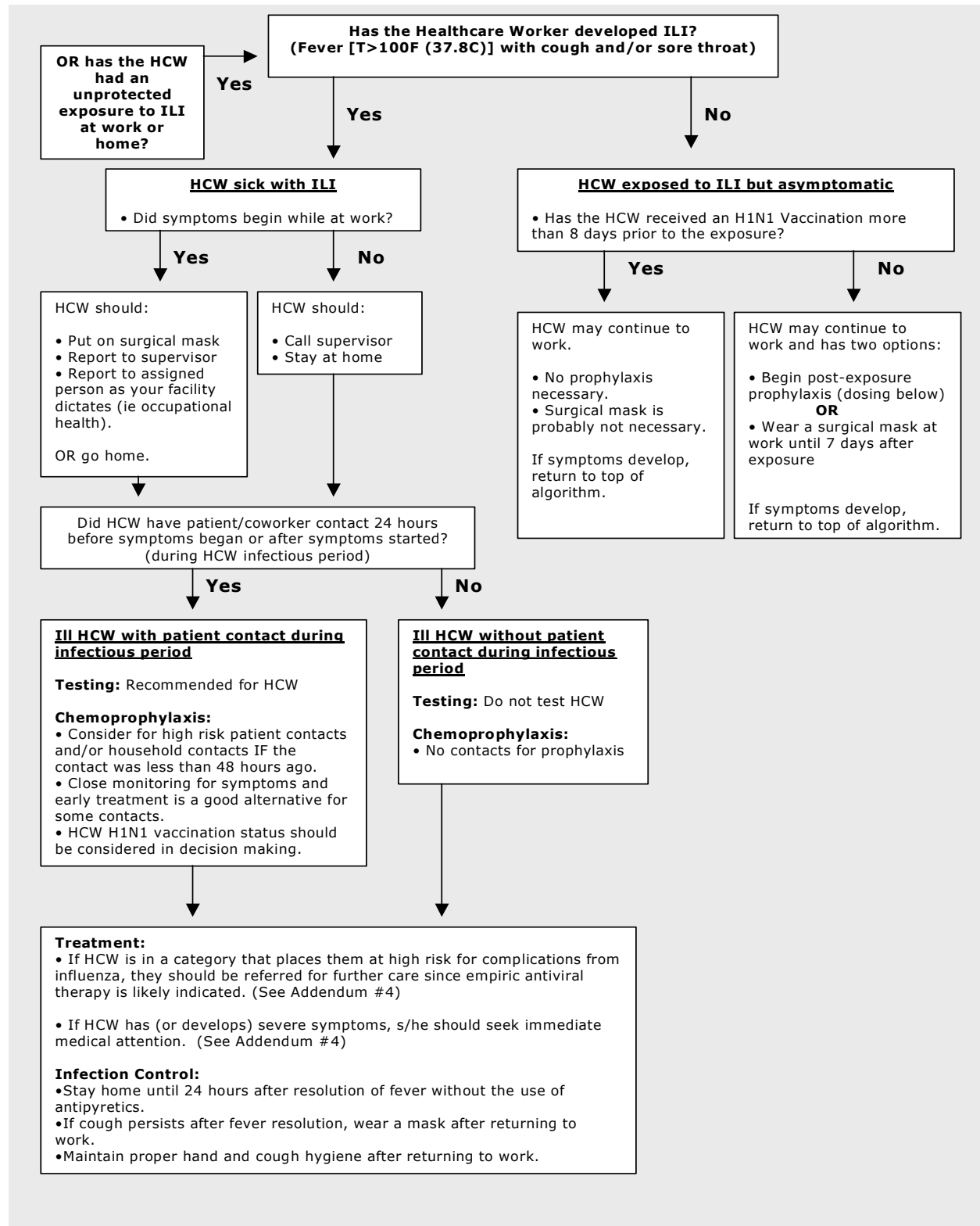
Algorithm for Management of Persons with ILI



**pulmonary, cardiovascular, hepatic, hematological, neurologic, neuromuscular, or metabolic
 ^Rapid diagnostic tests have low to moderate sensitivity for influenza (10-70%) and are not recommended by NH DHHS. A negative rapid test does not rule out influenza virus infection.

Addendum #5

Algorithm for Healthcare Workers ill with/exposed to ILI



DEFINITION OF TERMS AND ALERTING VOCABULARY

Message Type

- Alert: Indicates an original alert
- Update: Indicates prior alert has been updated and superseded
- Cancel: Indicates prior alert has been cancelled
- Error: Indicates prior alert has been retracted

Status

- Actual: Communication or alert refers to a live event
- Exercise: Designated recipients must respond to the communication or alert
- Test: Communication or alert is related to a technical, system test and should be disregarded

Severity

- Extreme: Extraordinary threat to life or property
- Severe: Significant threat to life or property
- Moderate: Possible threat to life or property
- Minor: Minimal threat to life or property
- Unknown: Unknown threat to life or property

Sensitive

- Sensitive: Indicates the alert contains sensitive content
- Not Sensitive: Indicates non-sensitive content

Message Identifier: A unique alert identifier that is generated upon alert activation.

Delivery Time: Indicates the timeframe for delivery of the alert.

Acknowledgement: Indicates whether an acknowledgement on the part of the recipient is required to confirm that the alert was received, and the timeframe in which a response is required.

Originating Agency: A guaranteed unique identifier for the agency originating the alert.

Alerting Program: The program sending the alert or engaging in alerts and communications using PHIN Communication and Alerting (PCA) as a vehicle for their delivery.

You have received this message based upon the information contained within our emergency notification database.

If you have a different or additional e-mail or fax address that you would prefer to be used please contact:

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