

**MODEL STANDING ORDERS**

**Influenza A (H1N1) 2009 Monovalent Vaccine Live, Intranasal (H1N1 LAIV)  
Revised 11/23/09**

These model standing orders are current as of November 23, 2009. They should be reviewed carefully against the current recommendations and may be revised by the clinician signing them.

**Changes to the H1N1 2009 Monovalent LAIV Standing Orders:**

- If seasonal LAIV and H1N1 LAIV are not given on same day, separate the 2 doses by at least 28 days; 14 days is acceptable.
  - If the 2nd dose of LAIV is administered 14 or more days after the first dose of LAIV, neither dose has to be repeated.
  - If the 2nd dose of LAIV was administered within 1-13 days of the first dose of LAIV, repeat the most recently administered vaccine at least 14 days (preferably 28 days) after the invalid (second) dose.
- If both doses of a 2-dose H1N1 vaccine schedule are LAIV, separate the first and second doses by at least 28 days preferably, but 14 days is acceptable. If the 2 doses are given less than 14 days apart, repeat the second dose at least 14 days (preferably 28 days from the invalid (second) dose.

**Influenza A (H1N1) 2009 Monovalent Vaccine Live, Intranasal (H1N1 LAIV)** is approved for administration to healthy, non-pregnant people 2 – 49 years of age.

Initially, H1N1 LAIV should be targeted to:

- Household contacts and caregivers of infants younger than 6 months old
- Health care personnel (**except** those caring for severely immunocompromised persons who require a protective environment) and emergency medical services personnel
- Healthy children and young adults 2 – 24 years old

When H1N1 vaccine becomes more available, MDPH will provide guidance about expanding H1N1 LAIV vaccination to:

- Healthy, non-pregnant adults 25 - 49 years of age

**ORDER:**

1. Provide patient, parent or legal representative with a copy of the Vaccine Information Statement (VIS) and answer any questions. VIS's in English and other languages are available from MDPH and online at <http://www.immunize.org/vis>.
2. Screen for contraindications according to Table 1.
3. Administer 0.2 mL LAIV vaccine intranasally (0.1 mL in each nostril), according to the

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recommended age-specific dose and schedule (Tables 2).

- Remove the rubber tip protector.
  - With the patient in an upright position, head tilted back, place the tip just inside the nose to ensure that seasonal LAIV is delivered into the nose.
  - With a single motion, depress the plunger as rapidly as possible until the dose-divider clip prevents you from going any further.
  - Pinch and remove the dose-divider clip from the plunger.
  - Place the tip just inside the other nostril and with a single motion; depress the plunger as rapidly as possible to deliver the remaining vaccine.
  - If the vaccine recipient sneezes after administration, the dose should not be repeated.
4. Administer H1N1 LAIV concurrently with other inactivated and live vaccines, except for seasonal LAIV. Other live vaccines not given on the same day should be administered at least 28 days apart.
- If seasonal LAIV and H1N1 LAIV are inadvertently given on the same day, the efficacy is not known, but the doses do not need to be repeated.
  - If seasonal LAIV and H1N1 LAIV are not given on same day, separate the 2 doses by at least 28 days; 14 days is acceptable.
    - If the 2nd dose of LAIV is administered 14 or more days after the first dose of LAIV, neither dose has to be repeated.
    - If the 2nd dose of LAIV was administered within 1-13 days of the first dose of LAIV, repeat the most recently administered vaccine at least 14 days (preferably 28 days) after the invalid (second) dose.
5. If possible, observe patient for an allergic reaction for 15 - 20 minutes after administering vaccine.
6. Facilities and personnel should be available for treating immediate hypersensitivity reactions.
7. Report clinically significant adverse events to the Vaccine Adverse Event Reporting System (VAERS) at 1-800-822-7967 or <http://www.vaers.hhs.gov/>.

See the MIP document General Protocols for Standing Orders for further recommendations and requirements regarding vaccine administration, documentation and consent.

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**Table 1. Contraindications and Precautions to H1N1 LAIV**

Valid Contraindications for H1N1 LAIV
<ul style="list-style-type: none"> <li>• Anaphylactic reaction to a previous dose of influenza vaccine, eggs<sup>1</sup>, egg protein<sup>1</sup>, gentamicin, gelatin or arginine or any other component of the vaccine (see package insert for specific components)</li> <li>• Age &lt; 2 and &gt; 49 years of age</li> <li>• Any of the underlying medical conditions that serve as an indication for routine influenza vaccination, including:               <ul style="list-style-type: none"> <li>○ Asthma, reactive airways disease,</li> <li>○ Wheezing episode in the previous 12 months for children 2 - 4 years of age.                   <ul style="list-style-type: none"> <li>- Consult medical record, if available, for history of asthma or recurrent wheezing</li> <li>- Ask parent or caregivers: “In the past 12 months, has a health care provider told you that your child has wheezing or asthma?”</li> <li>- If yes to either of these, use inactivated influenza vaccine</li> </ul> </li> <li>○ Other chronic disorders of the pulmonary or cardiovascular systems;</li> <li>○ Other underlying medical conditions, including metabolic diseases such as diabetes, renal dysfunction, and hemoglobinopathies;</li> </ul> </li> <li>• Known or suspected immunodeficiency diseases or immunosuppressed states;</li> <li>• Children aged 2 – 17 years of age receiving aspirin therapy or other salicylates</li> <li>• Pregnancy</li> <li>• Household or other close contact of a person with severe immunosuppression requiring a protective environment <sup>2</sup></li> </ul>

Precautions
<ul style="list-style-type: none"> <li>• Taking influenza antiviral medications<sup>3</sup></li> <li>• History of Guillain-Barré syndrome (GBS) within 6 weeks of a previous dose of influenza vaccine<sup>4</sup></li> <li>• Defer administration of LAIV if nasal congestion present, or use inactivated influenza vaccine</li> <li>• Moderate or severe illness with or without fever</li> </ul>

<sup>1</sup> Asking persons if they can eat eggs without adverse effects is a reasonable way to determine who might be at risk for an allergic reaction.

<sup>2</sup> Use of inactivated influenza vaccine is recommended over LAIV for health care workers, household contacts and anyone coming into close contact with severely immunocompromised persons during periods when such patients require care in a protected environment (typically described as a specialized patient-care area with a positive-airflow relative to the corridor, high-efficiency air filtration and frequent air changes).

<sup>3</sup> Because antivirals reduce replication of influenza viruses, LAIV should not be administered until 48

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hours after cessation of influenza antiviral therapy, and influenza antiviral medications should not be administered for 2 weeks after receipt of LAIV.

<sup>4</sup>It may be prudent to avoid influenza vaccination of persons who are not at high risk of complications from influenza and who have experienced GBS within 6 weeks of a previous dose of influenza vaccine. As an alternative, consider antiviral chemoprophylaxis for these persons.

**Table 2. Live Attenuated H1N1 Influenza Vaccine Dosage<sup>1</sup>, by Age Group**

Age Group	Dose/Schedule
2 – 9 years <sup>2</sup>	2 doses <sup>3</sup> (0.2 mL each)
10 - 49 years	1 dose (0.2 mL)

<sup>1</sup> One dose equals 0.2 mL, divided equally between each nostril.

<sup>2</sup> Children 9 years of age and younger should receive 2 doses of H1N1 vaccine, regardless of the number of doses of seasonal vaccine they have ever received.

<sup>3</sup> If both doses of H1N1 vaccine are LAIV, separate the first and second doses by at least 28 days preferably, but 14 days is acceptable. If the 2 doses are given less than 14 days apart, repeat the second dose at least 14 days (preferably 28 days from the invalid (second) dose).

Note: When feasible, the same type of vaccine (live attenuated or inactivated) should be used in a 2-dose schedule, but mixed schedules are preferable to not completing the series. A 28-day interval is recommended, but 21 days is acceptable. If the second dose in a mixed schedule are given less than 21 days apart, repeat the second dose at least 21 days (preferably 28 days) from the invalid (second dose).

### Administration of LAIV

Any health care provider can administer LAIV. This includes persons at risk for influenza complications who cannot themselves receive LAIV (e.g., pregnant women, persons with asthma, etc.) and persons  $\geq$  50 years of age. The only persons who should not administer LAIV are those who are severely immunocompromised themselves.

Neither masks nor gloves are necessary when administering LAIV.

### Tuberculosis Skin Testing (PPD) and LAIV

LAIV can be given on the same day as a PPD, or anytime after a PPD is applied. If the PPD cannot be applied before or on the same day as LAIV is administered, defer the PPD until at least 4 weeks after administering LAIV.

### LAIV Storage and Handling

Store LAIV in a refrigerator between 2 – 8°C (35 - 46°F) upon receipt and until it is used. Keep at that temperature until the expiration date is reached. Do not freeze.

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## Resources

CDC. Use of Influenza A (H1N1) 2009 Monovalent Vaccine: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009;58(No. RR-10):[1-9].  
<http://www.cdc.gov/mmwr/PDF/rr/rr5810.pdf>

CDC. Update on Influenza A (H1N1) 2009 Monovalent Vaccines. MMWR 2009. Vol. 58 / No. 39:[1100-1101]

CDC. Frequently asked questions on use of influenza A (H1N1) 2009 monovalent vaccines (2009 H1N1 vaccines): Practical considerations for immunization programs and providers. Revised 11/10/09  
[http://www.cdc.gov/H1N1flu/vaccination/top10\\_faq.htm](http://www.cdc.gov/H1N1flu/vaccination/top10_faq.htm)

MedImmune Influenza A (H1N1) 2009 Monovalent Vaccine Live, Intranasal Prescribing Information  
<http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM182406.pdf>

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