

Check List: Managing Patients Suspected of Having Varicella

The purpose of this checklist is to provide you step-by-step guidance when evaluating patients suspected to have varicella (chickenpox), with the goal of a reduction in the spread of varicella in the general community while also allowing for an expedient investigation with Public Health.

For questions, please call the Los Angeles County Department of Public Health Vaccine Preventable Disease Control Program (LACDPH VPDC) and ask to speak to the Epidemiology Unit:

(213) 351-7800 from 8:30am – 5:00pm Monday to Friday

(213) 974-1234 Administrative Officer on Duty after business hours and on weekends

- Step 1. Immediately isolate the suspected patient with chickenpox, using Airborne Transmissible Diseases precautions.^{1, 2}**
- 1a. Airborne precautions should be followed in healthcare settings.
 - 2a. Regardless of prior immunity status, all healthcare staff entering the room should use respiratory protection consistent with airborne infection control precautions (use of an N95 respirator or a respirator with similar effectiveness in preventing airborne transmission).
- ★ *Note:* The preferred placement for patients who require airborne precautions is in a single-patient airborne infection isolation room (AIIR) or negative airpressure room. Patient should remain completely isolated from other patients to prevent possible exposure to varicella.

- Step 2. Assess if the patient has chickenpox-like symptoms.³**

- 2a. Assess if patient has any of the following symptoms and obtain onset dates:
 - Rash: maculopapular rash (few hours) then vesicular rash (3-4 days)
 - Other Symptoms: Fever, fatigue, headache

Inset 1. Other chickenpox infections to consider:

- ★ Zoster (Herpes Zoster/ Shingles)
- ★ Congenital Varicella Syndrome
- ★ Perinatal Varicella

- Step 3. Collect appropriate specimen(s) for a timely diagnosis.^{4, 5}**

- 3a. Obtain specimen for PCR/virus isolation:
 - Collect cell from the base of the vesicular lesion by swabbing vigorously with a Dacron swab with plastic handle.
 - If lesion is scabbed, remove several scabs and place in a dry sterile cup
 - Use swab to smear on a microscope slide (for direct detection) and then place the swab into 1-2 mL of viral transport media (VTM) for virus isolation or PCR
 - 3b. Call the Public Health Laboratory courier to arrange for specimen pick-up weekdays 8:00am – 5:00pm: **562-658-1460** or call the **Administrative Officer on Duty after business hours/weekends.**
 - 3c. Complete Lab Forms available at http://publichealth.lacounty.gov/ip/VPDspecimen_collection.htm
 - 3d. Store specimens at 4°C/39°F until pick-up and ship with ice packs.
- ★ *Note:* If unable to ship within 48 hours, freeze specimen immediately at -70°C

Guidance for Clinicians: Varicella (Chickenpox)

Step 4. Assess for evidence of immunity in patient suspected for chickenpox.⁶

- 4a. Determine whether patient has at least one of the following:
 - Documentation of age appropriate chickenpox vaccination
 - Documented varicella IgG (+) test
 - Diagnosis or documented verification of a history of chickenpox or herpes zoster by a health care provider
- 4b. If there's no documented proof of immunity to chickenpox, immediately collect serum to measure varicella IgG antibody levels, regardless of age.

Step 5. Identify high-risk contacts/exposure sites to chickenpox.⁷

- 5a. Identify whether the patient has been in recent contact with any of the following individuals:
 - Infants <12 months of age
 - Pregnant Women
 - Persons unimmunized for chickenpox
 - Healthcare workers (including staff at facility)
 - Example Exposure Sites: School, work, medical facilities, other outside activities, etc.

Step 6. Notify patient to remain isolated until no longer infectious.

- 6a. Regardless of chickenpox immunity status, the case-patient should immediately not be allowed to attend school/work, participate in any social or academic activities nor attend large public gatherings/venues until all lesions have scabbed over.

Step 7. Immediately report a patient hospitalized with suspect chickenpox to Public Health by calling (888) 397-3993.

- 7a. Fax the following information to Public Health at (213) 351-2782.
 - Medical Records
 - All lab results assessing respiratory illness
 - Patient Demographics:
 - Name
 - Date of birth
 - Gender
 - Address
 - Telephone number(s)
 - Place of birth
 - Race/ Ethnicity
 - Years lived in the US
 - Immunization Records (if available)
 - Travel History in the last 2 months

□ Step 8. Identify and address potential chickenpox exposures in health care facilities.²

- 8a. Immediately isolate suspected chickenpox case-patient, using airborne isolation procedures:
 - Remove patients with rash from waiting areas, place a surgical mask & move into airborne isolation (negative pressure) room; do not send to other parts of health care facility for testing
- 8b. Identify susceptible individuals who could have been exposed to the case-patient 5 days before rash onset until all lesions have crusted:
 - Of these identified patients and staff, determine susceptibility status using criteria listed in Inset Box 2.
 - Once Public Health has confirmed the chickenpox diagnosis in the hospitalized case-patient, notify these individuals of their exposure and perform symptom monitoring weekly for 21 days from the date of last exposure.

Inset 2. Who is susceptible to chickenpox?

An individual who has direct or face-to-face contact with respiratory, oral, nasal or lesion secretions OR shared indoor, same room air space with a case-patient and has either of the following:

- No documented history of physician-diagnosed chickenpox
- No laboratory evidence of immunity (IgG-)
- No documentation of age-appropriate chickenpox vaccination (2 doses in adolescents and adults)

Exception: Any patient or staff who is considered immunocompromised or has just received immunosuppressive medications prior to their exposure to a suspected chickenpox case-patient should be considered susceptible regardless of their vaccination history.

Exposed and susceptible staff are not allowed to be at the worksite from day 8 after first exposure to at least 21 days after last exposure or until Public Health deems a later return date based on other extenuating circumstances (e.g., receipt of IG, household contact, etc.).

Susceptible exposed patients should be discharged or isolated for at least 21 days from the last exposure date or until Public Health deems a later return date based on other extenuating circumstances (e.g., receipt of IG, household contact, etc.).

- 8c. Contact Los Angeles County Department of Public Health for **specific** guidance in defining a chickenpox exposure.

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□ Step 9. Provide varicella zoster immune globulin (VariZIG) as soon as possible and within 10 days of exposure to specific exposed contacts.⁸

- 9a. Provide **VariZIG** to the following persons within **10 days** of exposure to chickenpox:
 - Immunocompromised persons without evidence of immunity;
 - Pregnant women without evidence or immunity; or
 - Newborn infant whose mother had onset of chickenpox within 5 days before delivery or within 48 hours after delivery
 - 9b. Administer **varicella vaccine** as post-exposure prophylaxis (PEP) to contacts within **3-5 days** after exposure to chickenpox; Acyclovir as PEP may be considered in some settings.
- ★ *Note:* Prophylaxis for healthy exposed, susceptible persons is not routinely recommended.

References:

1. Title 8 California Code of Regulations: ATD Standards. CDPH.
<https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/OHB/Pages/ATDStd.aspx>
2. Preventing Varicella in Health Care Settings. CDC.
<https://www.cdc.gov/chickenpox/hcp/healthcare-setting.html>
3. Signs and symptoms. CDC. <https://www.cdc.gov/chickenpox/about/symptoms.html>
4. Interpreting Laboratory Tests. CDC. <https://www.cdc.gov/chickenpox/hcp/lab-tests.html>
5. Collecting Specimens for Varicella Zoster Virus (VZV) Testing. CDC.
<https://www.cdc.gov/chickenpox/lab-testing/collecting-specimens.html>
6. Assessing Immunity to Varicella. CDC. <https://www.cdc.gov/chickenpox/hcp/immunity.html>
7. People at High Risk for Complications. CDC. <https://www.cdc.gov/chickenpox/hcp/high-risk.html>
8. Updated Recommendations for Use of VariZIG — United States, 2013. MMWR.
<https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6228a4.htm>