

# Update to the *Guideline for Infection Control in Healthcare Personnel, 1998* “Section 2”

HICPAC Infection Control in Healthcare Personnel Workgroup

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Disclaimer: The findings and conclusions herein are **draft** and have not been formally disseminated by the Centers for Disease Control and Prevention and should not be construed to represent any agency determination or policy.

# Infection Control in Healthcare Personnel Workgroup

- **Workgroup:** *Guideline for Infection Control in Healthcare Personnel, 1998*
- **Goal:** To provide updated information on Infection Control in Healthcare Personnel (HCP), Section 2
- **Workgroup Charge:** The workgroup will focus on pathogen-specific issues for Infection Control in Healthcare Personnel. Where information is out of date, the Workgroup will make updates using evidence-based methods *where evidence is available.*

# Status Report

## Section 2: Epidemiology and Prevention of Selected Infections Transmitted Among HCP and Patients

- Approved sections: Pertussis (Feb 2018); Mumps, Rubella (May 2018); Measles (Aug 2018); Meningococcal Disease (Nov 2018); Diphtheria, Group A *Streptococcus* (May 2019)
- May 2019 HICPAC meeting: Varicella, “draft” draft Parvovirus, CMV recommendations; Conjunctivitis and Polio discussion
- In Progress: Respiratory Viral Pathogens, *S. aureus*, Parvovirus, CMV
- “On Deck:” Rabies, Scabies and Pediculosis, Hepatitis A, Hepatitis B, Hepatitis C, Herpes, HIV, Tuberculosis

# Section 2 Pathogen Update: Methodology

- Different from prior guideline updates
- For each pathogen, the 1998 text and recommendations are being reviewed by the workgroup for elements that can be deleted, updated or continued.
- Specifically, the workgroup looks for
  - Outdated recommendations already updated elsewhere, e.g. ACIP
  - Areas with significant gaps between 1998 recommendations and current practices
  - Areas with new data/literature that can inform updated recommendations
  - Areas of need where 1998 guideline does not address a common issue or area of concern
- CDC pathogen-specific SMEs are also engaged to provide feedback on gaps, needed updates, and available literature
- Depending on that review process, either a Systematic Review or an Informal Review is conducted, and new literature is incorporated.

# Infection Control in HCP Workgroup: Methodology Impact

## Practical Impact:

- For pathogens with full formal literature review, key questions will inform literature review and literature review will inform recommendations, but may be broader discussion
  - We purposefully picked more open-ended key questions
- For pathogens with little to no new information/data/literature, most recommendations will be based on less formal reviews, expert opinion, other relevant guidelines and harmonizing with existing recommendations
  - Aiming for practical, thoughtful guidance where little directly applicable literature

# ***HICPAC Core Practices Document: 8. Occupational Health***

1. Ensure that healthcare personnel either receive immunizations or have documented evidence of immunity against vaccine-preventable diseases as recommended by the CDC, CDC's Advisory Committee on Immunization Practices (ACIP) and required by federal, state or local authorities.
2. Implement processes and **sick leave policies** to encourage healthcare personnel to stay home when they develop signs or symptoms of acute infectious illness (eg, fever, cough, diarrhea, vomiting, or draining skin lesions) to prevent spreading their infections to patients and other healthcare personnel.
3. Implement **a system for healthcare personnel to report** signs, symptoms, and diagnosed illnesses that may represent a risk to their patients and coworkers to their supervisor or healthcare facility staff who are responsible for occupational health.
4. Adhere to federal and state **standards and directives** applicable to protecting healthcare workers against transmission of infectious agents including OSHA's Bloodborne Pathogens Standard, Personal Protective Equipment Standard, Respiratory Protection standard and TB compliance directive.

# Section 2: Epidemiology and Prevention of Selected Infections Transmitted Among HCP and Patients

## Specific Pathogen Sections:

- Bloodborne Pathogens (HIV, HBV, HCV)
- Conjunctivitis / Adenovirus
- Cytomegalovirus
- Diphtheria
- Acute GI Infections (Norovirus, *C. difficile*, others)
- Hepatitis A
- Herpes Simplex
- Measles
- Meningococcal Disease
- Multidrug-Resistant Gram Negative Bacteria
- Mumps
- Parvovirus
- Pertussis
- Poliomyelitis
- Rabies
- Rubella
- Scabies and Pediculosis
- *Staphylococcus aureus* (MSSA/MRSA)
- *Streptococcus* (group A)
- Tuberculosis
- Vaccinia
- Varicella
- Viral Respiratory Infections (Influenza, RSV, others)
- Potential Agents of Bioterrorism (eg, Anthrax)



## Section 2: Varicella (Varicella-Zoster Virus)

- Workgroup reviewed 1998 recommendations for gaps/outdated recommendations
- Reviewed ACIP 2011 recommendations
- Reached out to CDC SMEs for input
- Presented “draft” draft recommendations and narrative text update to HICPAC, August 2018
- Revised and edited based on HICPAC feedback and in consultation with CDC SMEs
- Presented draft section to HICPAC, May 2019
- Section returned to Workgroup for additional refinement, discussion, consultation with CDC SMEs.

## Section 2: Varicella (Varicella-Zoster Virus)

- Clarified recommendations and aligned with Isolation Precautions recommendations

# Section 2: VZV Draft Recommendations

## *1998 Recommendations*

- a. Administer varicella vaccine to susceptible personnel, especially those that will have contact with patients at high risk for serious complications (Table 1). **Category IA**
- b. Do not perform serologic screening of persons with negative or uncertain history of varicella before administering varicella vaccine to personnel, unless the institution considers it cost-effective. **Category IB**
- c. Do not routinely perform postvaccination testing of personnel for antibodies to varicella. **Category IB**

## ***DRAFT Update***

**Delete:** Narrative will refer to *ACIP 2011 Recommendations for Immunization of Healthcare Personnel* and to HICPAC Core Practices Document.

- **ACIP:** “Healthcare institutions should ensure that all HCP have evidence of immunity to varicella.”
- **HICPAC Core Practices, Section 8 Occupational Health:** “1. Ensure that healthcare personnel either receive immunizations or have documented evidence of immunity against vaccine-preventable diseases as recommended by the CDC, CDC’s Advisory Committee on Immunization Practices (ACIP) and required by federal, state or local authorities.”

# Section 2: VZV Draft Recommendations

## *1998 Recommendations*

- e. Develop guidelines for managing health care personnel who receive varicella vaccine; for example, consider precautions for personnel who acquire a rash after receipt of varicella vaccine and for other health care personnel who receive varicella vaccine and will have contact with susceptible persons at high risk for serious complications from varicella. **Category IB**
- f. Develop written guidelines for postexposure management of vaccinated or susceptible personnel who are exposed to wild-type varicella. **Category IB**

## *DRAFT Update*

**Delete:** Section 1 of the updated Healthcare Personnel Guideline addresses administrative issues related to immunization of healthcare personnel, including development of policies and procedures. Draft updated recommendations address development of rash after receipt of varicella vaccine.

# Section 2: VZV *Draft* Recommendations

## *1998 Recommendations*

l. Perform serologic screening for immunity to varicella on exposed personnel who have not had varicella or are unvaccinated against varicella. **Category IB**

m. Consider performing serologic screening for immunity to varicella on exposed, vaccinated personnel whose antibody status is not known. If the initial test result is negative, retest 5 to 6 days after exposure to determine whether an immune response occurred. **Category IB**

## ***DRAFT Update***

**Delete:** Recommendations for vaccination of healthcare personnel, including serologic screening, are addressed in *ACIP 2011 Recommendations for Immunization of Healthcare Personnel*.

# Section 2: VZV Draft Recommendations

## *1998 Recommendations*

d. NO RECOMMENDATION for administering postexposure varicella vaccination for the protection of exposed, susceptible personnel.

### **UNRESOLVED ISSUE**

g. Exclude personnel from work who have onset of varicella until all lesions have dried and crusted (Table 3). **Category IB**

h. Exclude from duty after exposure to varicella personnel who are not known to be immune to varicella (by history or serology), beginning on the tenth day after the first exposure until the 21st day after the last exposure (28th day if VZIG was given; Table 3). **Category IB**

# Section 2: VZV Draft Recommendations

## *1998 Recommendations*

- i. Restrict immunocompetent personnel with localized zoster from the care of high-risk patients until lesions are crusted; allow them to care for other patients with lesions covered. **Category IB**
- j. Restrict immunocompromised personnel with zoster from contact with patients until their lesions are crusted (Table 3). **Category IB**
- k. Restrict susceptible personnel exposed to zoster from patient contact from the tenth day after the first exposure through the 21st day after the last exposure (28th day if VZIG was given; Table 3). **Category IB**
- n. Consider excluding vaccinated personnel from work beginning on the 10th day after the first exposure through the 21st day after the last exposure if they do not have detectable antibodies to varicella, or screen daily for symptoms of varicella (Table 3). **Category IB**

# Section 2: *VZV Draft Recommendations*

## *1998 Recommendations*

o. Do not routinely give VZIG to exposed susceptible personnel, unless immunosuppressed, HIV infected, or pregnant. If VZIG is given, exclude personnel from duty from the 10th day after the first exposure through the 28th day after the last exposure (Tables 1 and 3). **Category IB**

## *DRAFT Update*

**Delete/Reframe:** For vaccine versus VariZIG for postexposure prophylaxis, narrative provides brief description and refers to ACIP 2011 and a 2013 Update document on administration of immune globulin. Draft updated recommendation addresses extension of work restrictions for personnel who receive immune globulin as PEP.



# Section 2: VZV *Draft* Recommendations

## ***DRAFT Update Recommendation:***

1. For healthcare personnel ***with*** evidence of immunity to varicella who have an exposure to varicella or disseminated or localized herpes zoster:
  - a. Postexposure prophylaxis is not necessary.
  - b. Work restrictions are not necessary.
  - c. Implement daily monitoring for signs and symptoms of varicella infection during days 8-21 after the last exposure.

# Section 2: VZV Draft Recommendations

## ***DRAFT Update Recommendation:***

2. For healthcare personnel ***without*** evidence of immunity to varicella who have an exposure to varicella or disseminated or localized herpes zoster:
  - a. Administer postexposure prophylaxis in accordance with CDC and ACIP recommendations.
  - b. Exclude from work from the 8<sup>th</sup> day after the first exposure through the 21<sup>st</sup> day after the last exposure.
    1. Work restrictions are not necessary for healthcare personnel who previously received one dose of the varicella vaccine and *will receive the second dose of vaccine within 5 days after exposure.*
    2. If varicella-zoster immune globulin is administered as postexposure prophylaxis, exclude from work *from the 8<sup>th</sup> day after the first exposure through the 28<sup>th</sup> day after the last exposure.*

# Section 2: VZV *Draft* Recommendations

## ***DRAFT Update Recommendations:***

3. For healthcare personnel with varicella, exclude from work until all lesions have dried and crusted; or, for those who only have non-vesicular lesions that do not crust, exclude from work until no new lesions appear within a 24-hour period.

4. For healthcare personnel with disseminated herpes zoster, or for immunocompromised healthcare personnel with localized herpes zoster until disseminated disease has been ruled out, exclude from work until all lesions have dried and crusted.

# Section 2: VZV *Draft* Recommendations

## *DRAFT Update Recommendation:*

5. For healthcare personnel with localized herpes zoster, including vaccine-strain herpes zoster, and immunocompromised healthcare personnel with localized herpes zoster who have had disseminated disease ruled out:
  - a. Cover all lesions and exclude from direct care of patients at increased risk for complications from varicella disease until all lesions are dried and crusted.
  - b. If lesions cannot be covered (e.g., on the hands or face), exclude from work until all lesions are dried and crusted.

# Section 2: *VZV Draft* Narrative Section

Changes since HICPAC review, May 2019:

- Revised draft recommendation 5a
- Reviewed results of literature search: *For healthcare personnel working while infected with localized zoster, does covering lesions compared with not covering lesions prevent nosocomial transmission of zoster from personnel to patients?*
  - No relevant articles were found.
- Added mention in the narrative of the type of covering used for localized zoster in HCP.

# Section 2: *VZV Draft* Narrative Section

## Occupational Exposures

“VZV can be spread from person to person by direct contact, inhalation of aerosols from vesicular fluid of skin lesions of acute varicella or herpes zoster, and possibly through infected respiratory secretions from patients with varicella that also may be aerosolized.

### **Varicella and Disseminated Herpes Zoster (no changes)**

#### **Localized Herpes Zoster**

“VZV can also spread from a person with active localized herpes zoster to cause varicella in a susceptible person (ie, who has never had varicella or has not received varicella vaccine) from touching vesicular fluid from skin lesions without PPE.<sup>11</sup> **Covering the lesions is thought to reduce the risk of transmission to others**, and the lesions are infectious until they dry and crust over.

**“For HCP with localized herpes zoster, covering lesions serves the two-fold purpose of reducing the risk of transmission to others, as well as protecting the compromised skin from contamination and potential secondary infection. Data on the efficacy of one type of covering (e.g., sterile bandage, gauze, clothing, etc.) versus another for preventing virus transmission are limited (Appendix). Some facilities have policies regarding what types of dressings may be used to cover lesions in order for HCP with localized herpes zoster to report to work.”**

# Next Steps

- Vote: Varicella Section
- Continue work on Conjunctivitis/ Adenovirus, Viral Respiratory Diseases, CMV, Parvovirus, *S. aureus*, Polio
- Revise draft Pertussis, Meningococcal Disease, Diphtheria, Group A *Streptococcus* sections based on CDC clearance and public comment, review at HICPAC meeting
- Begin next pathogen sections
- Note: “Section 1” has completed CDC clearance and will be posted on the Infection Control Guidelines website soon!

# Acknowledgments

## Infection Control in Healthcare Personnel Workgroup

### Members:

Hilary Babcock, Vickie Brown, Ruth Carrico, Elaine Dekker, Michael Anne Preas, Mark Russi, Connie Steed, Michael Tapper, Tom Talbot, David Weber

### CDC Support:

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**Technical Support:** Marie DePerio (NIOSH), plus pathogen-specific SMEs

**CDC/DHQP Support:** Kendra Cox, Jamesa Hogges, Kristin Roberts, Srila Sen, Devon Schmucker, Erin Stone



# **Discussion/Comments/Questions**