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 Where information is out of date, the Workgroup will make updates using evidence-based methods *where evidence is available*.

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Status Report

Section 1: Infrastructure and Routine Practices for Occupational Infection Prevention and Control Services Published October 2019:

[https://www.cdc.gov/infectioncontrol/guidelines/healthcare-personnel/index.html]

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

- Approved: Pertussis (Feb 18); Mumps, Rubella (May 18); Measles (Aug 18); Meningococcal Disease (Nov 18); Diphtheria, Group A *Streptococcus* (May 19); Varicella (Aug 19)
- In CDC Clearance: Diphtheria, Group A *Streptococcus*, Meningococcal Disease, Pertussis
- Presenting today: Parvovirus, CMV sections; Rabies "DRAFT draft" recommendations
- In Progress: Respiratory Viral Pathogens, *S. aureus*, Conjunctivitis/ Adenovirus, Rabies, Vaccinia, Scabies and Pediculosis
- "On Deck:" Hepatitis A, Hepatitis B, Hepatitis C, Herpes, HIV, Tuberculosis

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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  - Outdated recommendations already updated elsewhere, e.g. ACIP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.

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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

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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.

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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)

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Section 2: Parvovirus

- Workgroup reviewed 1998 recommendations for gaps/outdated recommendations
- Reviewed ACIP 2011 recommendations
- Reached out to CDC SMEs for input
- Presented “draft” draft recommendations to HICPAC, May 2019
- Revised and edited based on HICPAC feedback and in consultation with CDC SMEs

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Section 2: Parvovirus

1998 Recommendations

a. Ensure that pregnant personnel are aware of the risks associated with parvovirus infection and of infection control procedures to prevent transmission when working with high-risk patient groups (Table 6) (274,275). ***Category IB***

b. Do not routinely exclude pregnant personnel from caring for patients with B19. ***Category IB***

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Section 2: Parvovirus

1998 Recommendations

a. Ensure that pregnant personnel are aware of the risks associated with parvovirus infection and of infection control procedures to prevent transmission when working with high-risk patient groups (Table 6) (274,275). ***Category IB***

DRAFT Update

Delete: Section 1 of the updated Healthcare Personnel Guideline addresses administrative issues, including counseling.

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Section 2: Parvovirus

1998 Recommendations

b. Do not routinely exclude pregnant personnel from caring for patients with B19. ***Category IB***

Draft Updated Recommendation:

1. Exclusion of pregnant or immunocompromised healthcare personnel from caring for patients with Parvovirus B19 infection is not necessary.

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Section 2: Parvovirus *Draft* Narrative Section

Occupational Exposures

"Transmission of parvovirus B19 occurs through deposition of respiratory, oral, or nasal secretions from an infected source person onto the mucous membranes of a susceptible host. Parvovirus B19 can also spread through exposure to blood or blood products, including sharps injuries.[12,13]

"Pregnant personnel are at no greater risk of acquiring B19 infection than are nonpregnant personnel; however, if a pregnant woman does acquire B19 infection during the first half of pregnancy, the risk of fetal death (fetal hydrops, spontaneous abortion, and stillbirth) is increased.[14-16] Concern for occupational exposures typically occurs when unprotected pregnant HCP (i.e., not wearing a facemask) provide care for patients with chronic parvovirus B19 infection or parvovirus B19 associated aplastic crisis who have not been placed in Droplet Precautions and are likely to be contagious.[13]"

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Section 2: Parvovirus *Draft* Narrative Section

Testing and Diagnosis

"If erythema infectiosum is present, a clinical diagnosis can be made without laboratory testing.[17] When laboratory testing is performed, parvovirus B19-specific antibody testing and viral DNA testing are available.[17] Testing for parvovirus is not typically performed by OHS.

"Routine testing for parvovirus is not indicated in pregnant women.[17] Guidance for submitting specimens to CDC for testing is available online (https://www.cdc.gov/laboratory/specimen-submission/list.html)."

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Section 2: Parvovirus *Draft* Narrative Section

Additional Considerations

“Although PEP is not administered after exposure to parvovirus B19, if clinical symptoms compatible with parvovirus B19 infection develop, it may be the underlying etiology. Pregnant HCP who are exposed to parvovirus B19 or develop signs and symptoms compatible with B19 infection are referred to their obstetrician for counseling and to discuss the need for further diagnostic testing and management.”

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Section 2: Parvovirus *Draft* Recommendations

Additional Recommendation?

2. For pregnant HCP who are exposed to parvovirus B19 or who develop signs and symptoms compatible with B19 infection, refer to their obstetrician for counseling and to discuss the need for further diagnostic testing and management.

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Section 2: Cytomegalovirus

- Workgroup reviewed 1998 recommendations for gaps/outdated recommendations
- Reviewed existing CDC guidance
- Presented “draft” draft recommendations to HICPAC, May 2019
- Revised and edited based on HICPAC feedback and in consultation with CDC SMEs

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Section 2: Cytomegalovirus

1998 Recommendations

a. Do not restrict personnel from work who contract CMV-related illnesses (119). ***Category IB***

b. Ensure that pregnant personnel are aware of the risks associated with CMV infection and infection control procedures to prevent transmission when working with high-risk patient groups (Table 6) (3,117). ***Category IA***

c. Do not routinely use workplace reassignment as a method to reduce CMV exposures among seronegative pregnant personnel (88,92,95-97,102,105,106,119,120). ***Category IA***

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Section 2: Cytomegalovirus

1998 Recommendations

b. Ensure that pregnant personnel are aware of the risks associated with CMV infection and infection control procedures to prevent transmission when working with high-risk patient groups (Table 6) (3,117). ***Category IA***

DRAFT Update

Delete: Section 1 of the updated Healthcare Personnel Guideline addresses administrative considerations, including counseling.

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Section 2: Cytomegalovirus

1998 Recommendations

a. Do not restrict personnel from work who contract CMV-related illnesses (119). ***Category IB***

c. Do not routinely use workplace reassignment as a method to reduce CMV exposures among seronegative pregnant personnel (88,92,95-97,102,105,106,119,120). ***Category IA***

Draft Updated Recommendations:

1. Work restrictions are not necessary for healthcare personnel who contract CMV.
2. Exclusion of pregnant or immunocompromised healthcare personnel from caring for patients with CMV infection is not necessary.

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Section 2: CMV *Draft* Narrative Section

Occupational Exposures

"Occupational transmission of CMV can be difficult to establish because most acute infections in adults are asymptomatic or present with mild symptoms. Transmission of CMV occurs through deposition of infectious body fluids (e.g., urine, saliva, blood, tears, semen, breast milk) from an infected source person on the mucus membranes of a susceptible host.[1] There are no recommended actions, such as administering postexposure prophylaxis (PEP) or work restrictions, after HCP exposure to CMV."

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Section 2: CMV *Draft* Narrative Section

Testing and Diagnosis

"Testing for CMV infection is not typically performed by OHS, nor indicated for most HCP, regardless of symptoms or potential exposure. Information on testing and diagnosis for CMV infection can be found on the CDC website (https://www.cdc.gov/cmv/clinical/lab-tests.html).[8]"

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Section 2: CMV *Draft* Narrative Section

Additional Considerations

"Although PEP is not administered after exposure to CMV, if clinical symptoms compatible with CMV infection develop, CMV infection may be the underlying etiology. No treatment is indicated for CMV infection in healthy adults.[1,7] For immunocompromised HCP and pregnant HCP who develop signs and symptoms compatible with CMV infection, referral to their infectious diseases specialist, transplant team, or obstetrician may be indicated for counseling or to discuss the possible need for further diagnostic testing and management."

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Section 2: Rabies

- Workgroup reviewed 1998 recommendations for gaps/outdated recommendations
- Reviewed existing CDC guidance
- Presenting “draft” draft recommendations

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Section 2: Rabies

1998 Recommendations

a. Provide preexposure vaccination to personnel who work with rabies virus or infected animals in rabies diagnostic or research activities (Table 1) (5,22). ***Category IA***

b. After consultation with public health authorities, give a full course of antirabies treatment to personnel who either have been bitten by a human being with rabies or have scratches, abrasions, open wounds, or mucous membranes contaminated with saliva or other potentially infective material from a human being with rabies. In previously vaccinated individuals, postexposure therapy is abbreviated to include only a single dose of vaccine on day 0 and one on day 3 (Table 1) (295-297). ***Category IB***

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Section 2: Rabies

1998 Recommendations

a. Provide preexposure vaccination to personnel who work with rabies virus or infected animals in rabies diagnostic or research activities (Table 1) (5,22). ***Category IA***

DRAFT Update

Delete: ACIP maintains vaccine recommendations. Narrative will refer to appropriate resources.

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Section 2: Rabies

1998 Recommendations

b. After consultation with public health authorities, give a full course of antirabies treatment to personnel who either have been bitten by a human being with rabies or have scratches, abrasions, open wounds, or mucous membranes contaminated with saliva or other potentially infective material from a human being with rabies. In previously vaccinated individuals, postexposure therapy is abbreviated to include only a single dose of vaccine on day 0 and one on day 3 (Table 1) (295-297). ***Category IB***

DRAFT Draft Updated Recommendations:

1. For healthcare personnel who have an exposure to rabies virus, administer postexposure prophylaxis in accordance with CDC recommendations and in consultation with public health authorities.
2. Work restrictions are not necessary for healthcare personnel who have an exposure to rabies virus.

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Next Steps

- Vote: CMV Section
- After CDC clearance, submit Pertussis, Meningococcal Disease, Diphtheria, Group A *Streptococcus* sections to regulations.gov for public comment; aggregate public comment to present with updated drafts at upcoming HICPAC meeting for approval and finalization
- Continue next sections

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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

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Workgroup DFO: David Kuhar
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Discussion/Comments/Questions