Update to the Guideline for Infection Control in Healthcare Personnel, 1998

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HICPAC Meeting
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Outline

- Background
  - General topics addressed in the 1998 Guideline

- Section 1 Discussion
  - Input from HICPAC

- Section 2 Update
Background: Guideline for Infection Control in Healthcare Personnel, 1998

- Audience for recommendations: occupational health providers working in healthcare facilities (especially acute care hospitals)
- **Section 1**: 7 elements of occupational health service
- **Section 2**: Epidemiology and prevention of infections transmitted in healthcare settings
  - For each pathogen, described methods to prevent transmission among healthcare personnel (HCP) and patients, e.g.,
    - preplacement screening and immunizations
    - managing HCP exposures and illness, including work/duty restrictions
- **Section 3**: Special populations (e.g., pregnant HCP, emergency-response personnel)
Organization of Updated Guideline

- **Section 1: Occupational Health Services infrastructure and Routine Practices for Occupational Infection Prevention**
  - Descriptive text plus hyperlinks to supplementary materials that can be updated over time (e.g., preplacement vaccines)
  - Plan to publish before Section 2

- **Section 2: Epidemiology, Prevention and Control of Selected Infections Transmitted Among HCP and Patients**
  - Will address special HCP populations (e.g., pregnant, immunodeficient, temporarily practice outside U.S.)
Features of Updated Guideline

- Slightly revised organization
- Expanded scope (Section 1)
  - New topics on leadership and management and assessment and reduction of risks for infection in populations of HCP
  - New recommendations for administrators and leaders of healthcare organizations
  - ↑ focus on ambulatory and long-term care settings
- Revised list of pathogens (Section 2)
- Electronic, “living” document that is updated segmentally on DHQP website
- HICPAC input and public comment
# Section 1: Writing Group Members

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<thead>
<tr>
<th>CDC</th>
<th>HICPAC members</th>
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<tbody>
<tr>
<td>David Kuhar (DHQP)</td>
<td>Hilary Babcock</td>
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<td>Kathleen Irwin (DHQP)</td>
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<td>Kristin Roberts (DHQP)</td>
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<td>Mahnaz Dasti (DHQP)</td>
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<th>Other Experts</th>
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<tr>
<td>Ruth Carrico</td>
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<td>Mark Russi (ACOEM)</td>
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<td>Connie Steed (APIC)</td>
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<td>Tom Talbot</td>
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<td>Michael Tapper</td>
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<td>David Weber (SHEA)</td>
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Basis for Section 1 Recommendations

- “Good practice statements” based on program experience, expert opinion, other guidelines, and/or scientific evidence indicating a high level of certainty that the recommendation would do more good than harm based on available information:
  - ~ 310 articles about interventions from systematic lit review
  - ~ 25 government and non-government websites
  - ~ 30 government and non-government guidelines

- OR

- Regulatory requirements
Section 1 Discussion

- Discussion of section 1 draft recommendations
- General feedback on the draft
Review of Section 1 Recommendations

- Questions for consideration as recommendations are reviewed
  - Should any recommendations be added, omitted, or rephrased?
  - Do the recommendations generally apply to a broad range of healthcare settings (e.g., inpatient and outpatient) and methods of delivering occupational infection prevention services (e.g., on-site, off-site, contracted services)? If not, what changes are suggested?
Comments on Section Recommendations: Refer to Recommendation List

- Leadership and management - 15 Recommendations
- Interdisciplinary communication and collaboration - 5 Recommendations
- Assessment and reduction of risks for infection among populations of Healthcare Personnel - 6 Recommendations
- Medical evaluations - 17 Recommendations
- Occupational infection prevention education and training programs - 3 Recommendations
- Immunization programs - 4 Recommendations
- Management of potentially infectious exposures and illnesses - 3 Recommendations
- Management of HCP health records and information - 7 Recommendations
Section 1 Feedback: General Issues

- Does the information in the draft provide sufficient support for the recommendations?
  - Are there any topics for discussion in any section that should be added or removed?
  - Would additional discussion in the Immunization Programs section (6) be beneficial for occupational health leaders or staff?
    - Immunization strategies associated with highest immunization rates among HCP
  - Comments on other sections (e.g., introduction, Appendices including Methods)
Section 2: Epidemiology and Prevention of Selected Infections Transmitted Among HCP and Patients

- Introduction/Review of isolation precautions
- Specific pathogens:

<table>
<thead>
<tr>
<th>Bloodborne Pathogens</th>
<th>Parvovirus</th>
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<tbody>
<tr>
<td>(HIV, HBV, HCV)</td>
<td>Pertussis</td>
</tr>
<tr>
<td>Conjunctivitis</td>
<td>Poliomyelitis</td>
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<tr>
<td>CMV Disease</td>
<td>Rabies</td>
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<tr>
<td>Diphtheria</td>
<td>Rubella</td>
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<tr>
<td>Acute GI Infections</td>
<td>Scabies and Pediculosis</td>
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<tr>
<td>(Norovirus, <em>C. diff</em>, others)</td>
<td><em>Staphylococcus aureus (MSSA/MRSA)</em></td>
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<tr>
<td>Hepatitis A</td>
<td><em>Streptococcus (group A)</em></td>
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<tr>
<td>Herpes Simplex</td>
<td>Tuberculosis</td>
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<tr>
<td>Measles</td>
<td>Vaccinia</td>
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<tr>
<td>Meningococcal Disease</td>
<td>Varicella</td>
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<tr>
<td>Multidrug-Resistant Gram Negative Bacteria</td>
<td>Viral Respiratory Infections (Influenza, RSV, others)</td>
</tr>
<tr>
<td>Mumps</td>
<td>Potential Agents of Bioterrorism (e.g., Anthrax)</td>
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Section 2: Outline for each Pathogen Subsection

- Overview/Epidemiology: pathogen, clinical manifestations, risk groups, transmission in healthcare settings, incubation period, period of communicability
- Methods to prevent transmission and acquisition (e.g., link to recommended isolation precautions, vaccination)
- Individual risk assessment, screening, and diagnosis
- Management of colonized, exposed, and/or infected HCP (e.g., postexposure prophylaxis, duty restrictions)
- Role of Occupational Health Services in outbreaks involving HCP
Evidence Base for Pathogen Updates

- Compile credible information (supported with literature review as needed) on selected topics
  - Rates of pathogen colonization in adults and HCP in U.S.
  - Clinical manifestations of infection
  - HCP sub-groups at higher risk for infection
- Identify important questions not addressed by other recent federal guidance
- Systematic Literature Review for these questions
Section 2 Status

- Simultaneous work on several pathogens
  - Focusing on developing *Staphylococcus aureus* section

- Developed a strategy to review each pathogen section and identify areas for update

- Developed questions to be addressed by systematic literature review for *Staphylococcus aureus*

- *Staphylococcus aureus* literature review
  - Refining inclusion and exclusion criteria for the identified literature
  - Non-U.S. literature
Leadership and Management

1.3.1 For administrators of healthcare facilities and service delivery programs

- Support a safety culture that includes occupational infection prevention.
- Assign one or more leaders with the appropriate training and experience to address occupational infection prevention services.
- Assign leader(s) responsibility, authority, and accountability for leading occupational infection prevention services.
- Confirm that occupational infection prevention service leader(s) are trained to manage functions that they are assigned and provide additional training if needed.
Leadership and Management

- Provide sufficient resources (e.g., funding, staff, supplies, information technology) for essential elements of occupational infection prevention services, including
  - Leadership and Management
  - Interdisciplinary communication and collaboration
  - Assessment and reduction of risks for infection among populations of HCP
  - Medical evaluation and risk assessment of individual HCP
  - Health and safety education and training programs for HCP
  - Immunization programs for HCP
  - Management of potentially infectious exposures and illnesses
  - Management of HCP health records and information

- Oversee, and charge OH leaders to participate in, performance measurement and continuous quality improvement activities aimed at improving occupational infection prevention services.
Leadership and Management

1.3.2 For leaders and staff of occupational health services

- Advocate for a safety culture that includes occupational infection prevention.
- Develop occupational infection prevention services that are tailored to the needs of the HCP.
- Collaborate with HCO entities that lead regulatory compliance, accreditation, conditions of participation related to reimbursement, environmental safety, and quality improvement activities that address occupational infection prevention.
Leadership and Management

- Develop, and update at least annually, policies and procedures that adhere to federal, state, and local requirements for all essential elements of occupational infection prevention services, including:
  - Leadership and Management
  - Interdisciplinary communication and collaboration
  - Assessment and reduction of risks for infection among populations of HCP
  - Medical evaluation and risk assessment of individual HCP
  - Health and safety education and training programs for HCP
  - Immunization programs for HCP
  - Management of potentially infectious exposures and illnesses
  - Management of HCP health records and information
Leadership and Management

- Collaborate with appropriate entities when developing infectious disease emergency management plans.
- Inform all HCP and relevant HCO entities about occupational infection prevention policies and procedures.
- Participate in HCO committees or groups that address occupational infection prevention.
- Periodically assess the effectiveness of occupational infection prevention services.
- Collaborate with others (e.g., administrators, infection prevention services and other programs involved in occupational infection prevention, HCP) to set and meet performance measurement and quality improvement goals for all occupational infection prevention services.
Interdisciplinary Communication and Collaboration

2.3.1 For administrators and leaders of healthcare organizations

- Convene and support interdisciplinary committees or groups of experts to establish HCO goals, policies and procedures, infrastructure, budgets, and interventions that address occupational infection prevention.

- Support manager training and skill development in effective communication, collaboration, and consensus building. [The Joint Commission - 2012; APIC - 2009]
Interdisciplinary Communication and Collaboration

2.3.2 For leaders and staff of occupational health services

- Engage senior leaders, administrators, and leaders of other programs that share activities related to occupational infection prevention to foster collaborative decision-making.
- Develop policies and procedures that foster regular communication and shared decision-making, when appropriate, among leaders of OH services, HCO senior leadership, and other HCO programs with objectives related to occupational infection prevention.
- Participate in interdisciplinary committees and groups that foster occupational infection prevention services and interventions.
Assessment and Reduction of Risks Among Populations of HCP

3.3.1 For administrators and leaders of healthcare organizations

- Regularly review results of risk assessments related to occupational infection prevention, set performance goals, and charge relevant HCO entities to reduce risks
Assessment and Reduction of Risks Among Populations of HCP

3.3.2 For leaders and staff of occupational health services

- Conduct or collaborate with other HCO entities in regular risk assessments and reduction activities related to occupational infection prevention
- Review occupational infection prevention risk assessment and reduction activities for effectiveness at reducing occupational risks and hazards
- Notify other HCO entities and leaders about hazards identified and risk reduction priorities for HCP.
- Participate in committees and decision-making processes that affect occupational infection prevention efforts
- Provide information and advice on risk mitigation strategies to HCO leaders and entities with activities related to occupational infection prevention
Medical Evaluations

4.3.1 For administrators and leaders of healthcare organizations

- Make job descriptions for HCP available to occupational health providers before PPME so they can assess job-related infection risks.
Medical Evaluations

4.3.2 For leaders and staff of occupational health services

- Develop policies and procedures for providing preplacement, periodic, and episodic medical evaluations that
  - Include health assessments, physical examinations, screening and diagnostic testing, immunization services, exposure and illness management, counseling, and reporting of findings of medical evaluations
  - Enable confidential communication between clinicians who perform medical evaluations and selected HCO entities about medical conditions that relate to job duties
Medical Evaluations

4.3.2.1 For preplacement medical evaluations

- Review employee’s job description for duties that may affect risk of acquiring or transmitting infections in healthcare settings
- **Collect a directed health inventory to assess**
  - history of medical conditions and other factors that may affect the risk of acquiring or transmitting infections in healthcare settings
  - evidence of immunity to vaccine-preventable diseases recommended by CDC/ACIP
- **Conduct or refer HCP for physical examination, as indicated, to assess medical conditions that might affect risk of acquiring or transmitting infections in healthcare settings**
Medical Evaluations

- Conduct or refer HCP for preplacement infectious diseases screening (e.g., tuberculosis) as recommended by CDC. [2005 prevention of TB in healthcare settings guidelines; 2010 TST/IGRA testing use guidelines]

- Conduct routine serologic screening for evidence of immunity to CDC/ACIP recommended vaccine-preventable diseases, when indicated.[ACIP 2011- Shefer]

- Provide or refer HCP for services that reduce risks of infectious disease transmission before job placement (e.g., provide needed immunizations, education and training, infectious disease expert panel evaluation).
Medical Evaluations

- Provide or refer HCP for counseling to address
  - health conditions that may increase their risk of acquiring or transmitting infections in health care settings (e.g., immunocompromised, pregnancy) and recommended actions to reduce those risks
  - procedures for managing workplace exposures and illnesses.
  - recommendations about work or duty restrictions
  - confidentiality of their health information
  - HCP concerns about occupational infection prevention

- Provide or refer HCP for medical clearance for respirator fit testing, if indicated, as part of a respiratory protection program.
Medical Evaluations

4.3.2.2 For periodic medical evaluations

- Provide additional doses of immunizations, as needed, to ensure HCP have evidence of immunity to CDC/ACIP recommended vaccine-preventable diseases [ACIP 2011]
- Perform or refer HCP for indicated follow-up testing (e.g., serologic testing for Hepatitis B vaccination response)
- Conduct periodic screening for tuberculosis, if indicated, in accordance to federal, state and local requirements and latest CDC recommendations (cite 2005 TB guideline and 2010 IGRA testing guideline).
- Provide or refer HCP for counseling relevant to the reason for the visit
- Provide or refer HCP for periodic medical clearance for respirator fit testing, if indicated, as part of a respiratory protection program.
Medical Evaluations

4.3.2.3 For episodic medical evaluations

- Conduct or refer HCP for medical evaluations on an as-needed basis for
  - Evaluation and management of potentially infectious illnesses and exposures
  - Evaluation and management of new health conditions (e.g., pregnancy, rashes) that may affect risk of acquiring or transmitting infections or ability to perform job functions
  - PPME for HCP who are changing job-duties
  - Surveying HCP for exposures and/or illness during outbreaks of infectious diseases in healthcare settings that might involve HCP, if indicated

- Provide or refer HCP for counseling relevant to the reason for the visit
Occupational Infection Prevention Education and Training Programs

5.3.2 Recommendations for leaders and staff of occupational health programs

- Collaborate with appropriate HCO (e.g., infection prevention, human resources, risk management) or external entities to:
  - Define the goals and scope of education and training for HCP about occupational infection prevention
  - Develop written policies and procedures in appropriate languages for the education and training of HCP.
  - Provide HCP initial, periodic, and as needed education and training during work hours that is specific to HCP work assignments.
  - Consider use of multimedia strategies and resources (e.g., web-based materials, video conferencing) for education and training of HCP.
  - Provide educational information appropriate in content to the educational level, literacy, and language of HCP.
  - Review HCP exposure data to identify high risk sub-populations for refresher infection prevention education and training
Occupational Infection Prevention Education and Training Programs

- Determine refresher education topics based upon analyses of HCP exposure incident reports, risk assessments and other methods that identify infectious hazard vulnerabilities for HCP.
- At a minimum, include the following topics for initial, periodic, and as-needed education and training, as appropriate to HCP job responsibilities and functions:

  - Federal, state, and local education and training requirements (Box 5.1)
  - Modes of infectious disease transmission and adherence to standard and transmission-based precautions (Siegel 2007)
  - Hand hygiene (Siegel 2007)
  - Sharps injury prevention
  - Immunizations recommended by CDC/ACIP for HCP
Occupational Infection Prevention Education and Training Programs

- HCP screening for selected infectious diseases (e.g., tuberculosis) before job placement and periodically thereafter
- How to access occupational health services, when needed
- Reporting exposures (e.g., to blood and body fluids) to prevent transmission of infectious diseases and postexposure management
- Reporting certain illnesses or conditions (work-related or acquired outside of work), including generalized rashes or skin conditions (e.g., non-intact skin on hands); febrile, respiratory, and gastrointestinal illnesses, and hospitalizations resulting from contagious diseases
- Sick leave and other policies and procedures related to infectious HCP, and the risks of presenteeism to other HCP and patients
- Importance of collaborating with infection prevention experts during outbreak investigations
Immunization Programs

6.3.1 For administrators and leaders of healthcare organizations

- Set goals to achieve high rates of evidence of immunity to vaccine-preventable diseases among HCP
Immunization Programs

6.3.2 Recommendations for leaders and staff of occupational health programs

- Develop and annually update policies and procedures on immunizing HCP that:
  - adheres to the CDC/ACIP recommendations for immunizing HCP
  - specifies strategies to acquire and document HCP evidence of immunity to recommended vaccine preventable diseases
  - specifies strategies for gathering and reviewing immunization exemptions
  - specifies all preplacement, annual, and other immunizations that HCP should receive and strategies to offer vaccines.
Immunization Programs

- specifies appropriate storage, handling, administration, and documentation of vaccines[CDC vaccine toolkit- http://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/index.html]
- specifies reporting of adverse events for all vaccines administered to HCP

- For each individual HCP:
  - Determine if HCP require immunization after review of evidence of immunity, allergies and immunization contraindications,
  - Develop a plan to provide or refer eligible HCP for administration of recommended vaccines and reporting mechanism for adverse events

- Periodically assess immunization programs and coverage rates in HCP and implement quality improvement activities to minimize program deficiencies.
Management of Potentially Infectious Exposures and Illnesses

7.3.2 Recommendations for leaders and employees of occupational health programs

- Develop policies and procedures about HCP exposure and illness management services that
  - Adhere to most current U.S. Public Health Service exposure and illness management recommendations
  - Describe methods to provide job-related exposure and illness management services (e.g., provision of postexposure prophylaxis or treatment, counselling for the exposed or ill provider, follow-up care)
  - Establish a timely, confidential, and non-punitive mechanism for HCP to report and access exposure and illnesses management services 24 hours a day and 7 days per week.
Management of Potentially Infectious Exposures and Illnesses

- Address non-punitive sick leave options to encourage HCP reporting of exposures and illness and discourage presenteeism.
- Facilitate access to healthcare professionals with expertise in infectious disease exposure and/or illness management who are available 24 hours a day and 7 days per week.
- Facilitate prompt access to laboratory testing, prophylactic medications, vaccines, and treatment for managing exposures and illnesses.
- Describe duty and work restrictions for exposed or ill HCP that:
  - Identify those with the authority to impose duty or work restrictions and clear HCP for return to work after an infectious exposure or illness.
  - Establish criteria for duty and work restrictions
  - Establish methods of communication between OH services, human resources, and HCP about duty and work restrictions.
Management of Potentially Infectious Exposures and Illnesses

- Describe criteria, methods and designated individuals responsible for reporting information on HCP exposure and illness events or suspected infectious outbreaks involving HCP to HCO leadership and/or external authorities (e.g., public health authorities)

- Provide or refer HCP who have sustained job-related potentially infectious exposures or illnesses for prompt management that includes the following
  - Evaluating the exposed or ill provider
  - Providing immediate care for the exposed site, if applicable (e.g., first aid)
  - Evaluating the exposure source, including whether the source was potentially infectious and the mechanism of the exposure (e.g., percutaneous injury, inhalation)
  - Arranging for testing HCP for potentially infectious conditions, if indicated.
  - Determining the risk of developing an infection, if any, associated with possible exposures
Management of Potentially Infectious Exposures and Illnesses

- **Providing counselling regarding**
  - risk of exposure or illness
  - testing
  - options for and risks and benefits of postexposure prophylaxis or treatment
  - need for specialty care
  - follow-up testing and treatment
  - the emotional effect of an exposure of illness
  - confidentiality of health information
  - duty or work restrictions and avoiding presenteeism, if indicated
  - risk of transmitting infections to others and methods to prevent transmission
  - signs and symptoms of illness to report after an exposure including potential side effects of prophylaxis
Management of Potentially Infectious Exposures and Illnesses

- Offering prophylactic medication, vaccination and/or treatment, if indicated
- Providing or referring for follow-up care
- Facilitate reporting of information on HCP exposure and illness events or suspected infectious outbreaks involving HCP to HCO leadership and/or external authorities (e.g., public health authorities)
Management of HCP Health Records and Information

8.3.1 For administrators and leaders of healthcare organizations

- Establish systems that enable maintenance of confidential work-related health records on HCP, preferably in electronic systems that
  - are separate from the healthcare organization’s medical and laboratory records for patients, if possible.
  - provide notifications indicating when specific health activities are due (e.g., screening tests, immunizations)
  - enable both routine and urgent access to occupational health records by authorized staff who provide occupational infection prevention services to HCP
  - foster collaboration with other HCO data systems (e.g., HCP Electronic Medical Record able to communicate with Human Resources information systems about work restrictions)
Management of HCP Health Records and Information

- Establish systems that allows for maintenance of a HCP database, preferably electronic, that enables
  - tracking of medical evaluations, HCP evidence of immunity to vaccine preventable diseases, and infectious disease screening tests
  - assessments of trends in exposures and infections in HCP for risk assessment and reduction activities.
  - reporting of HCP information to internal (e.g., safety committees) or external (e.g., NHSN) entities while maintaining confidentiality (e.g., de-identification when indicated)
Management of HCP Health Records and Information

- 8.3.2 For leaders and staff of occupational health services
- Participate in the development of HIPAA compliant HCP information plans that ensure confidentiality of HCP records and facilitate efficient exchange of HCP health information
- Maintain HCP records and databases that
  - include information about medical evaluations, disease screening and surveillance, exposure and illness management, evidence of immunity and immunizations, and duty or work restrictions
  - enable authorized exchange of HCP medical information with other health entities, using appropriate protections for identifiable information (e.g., HIPAA release).
Management of HCP Health Records and Information

- Ensure that communications with other entities, departments, and individuals regarding HCP occupational health information is authorized and/or maintains provider confidentiality.
- Facilitate HCP data aggregation that might inform activities related occupational infection prevention.
- Strictly maintain the individual’s confidentiality when data on HCP health are reported or made public.
- Copies of their individual records should be made promptly available to HCP upon request, preferably within 15 days [OSHA Toxic and hazardous Standard 1910.1020]
Thank you!

For more information, please contact
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The findings and conclusions in this presentation are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.