Complete Summary

GUIDELINE TITLE

Guideline for isolation precautions: preventing transmission of infectious agents in healthcare settings 2007. Administrative responsibilities.

BIBLIOGRAPHIC SOURCE(S)

Siegel JD, Rhinehart E, Jackson M, Chiarello L, Healthcare Infection Control Practices Advisory Committee. 2007 guideline for isolation precautions: preventing transmission of infectious agents in healthcare settings. Administrative responsibilities. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 2007 Jun. 3 p.

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: Centers for Disease Control and Prevention (CDC), Hospital Infection Control Practices Advisory Committee. Guidelines for isolation precautions in hospital infection control advisory committee. Atlanta (GA): Centers for Disease Control and Prevention (CDC); 1996 Jan 1. 38 p. (CDC prevention guidelines; no. 1/96). [97 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Healthcare-associated infections

GUIDELINE CATEGORY

Prevention

CLINICAL SPECIALTY

Infectious Diseases
Nursing
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Allied Health Personnel
Health Care Providers
Hospitals
Nurses
Physician Assistants
Physicians

GUIDELINE OBJECTIVE(S)

- To provide infection control recommendations for all components of the healthcare delivery system, including hospitals, long-term care facilities, ambulatory care, home care and hospice
- To reaffirm Standard Precautions as the foundation for preventing transmission during patient care in all healthcare settings
- To reaffirm the importance of implementing Transmission-Based Precautions based on the clinical presentation or syndrome and likely pathogens until the infectious etiology has been determined
- To provide epidemiologically sound and, whenever possible, evidence-based recommendations

TARGET POPULATION

Patients, administrators, and healthcare personnel in all settings where healthcare is delivered

INTERVENTIONS AND PRACTICES CONSIDERED

Planning and management of facilities, equipment, and personnel to facilitate infection control measures

MAJOR OUTCOMES CONSIDERED

- Adherence to infection control procedures by healthcare personnel
- Rates of transmissions and acquisition of healthcare-associated infections

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Med-line and Pub Med were used to search for relevant studies published in English, focusing on those published since 1996.

The quality of studies, consistency of results and correlation with results from randomized, controlled trials when available were considered during the literature review and assignment of evidence-based categories to the recommendations in this guideline.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Expert Consensus

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not applicable

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Not stated

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

The recommendations are categorized on the basis of existing scientific data, theoretical rational, applicability, and when possible, economic impact, as follows:

Category IA. Strongly recommended for implementation and strongly supported by well-designed experimental, clinical, or epidemiologic studies.

Category IB. Strongly recommended for implementation and supported by some experimental, clinical, or epidemiologic studies and a strong theoretical rationale.

Category IC. Required for implementation, as mandated by federal and/or state regulation or standard.

Category II. Suggested for implementation and supported by suggestive clinical or epidemiologic studies or a theoretical rationale.

No recommendation; unresolved issue. Practices for which insufficient evidence or consensus regarding efficacy exists.

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the strength of recommendation grading (IA-IC, II, and no recommendation) are provided at the end of the "Major Recommendations" field.

Administrative Responsibilities

Healthcare organization administrators should ensure the implementation of recommendations in this section.

I.A. Incorporate preventing transmission of infectious agents into the objectives of the organization's patient and occupational safety programs (Institute of Medicine [IOM], 1999; Gerberding, 2002; Leape, Berwick, & Bates, 2002; Burke, 2003; Larson et al., 2000; Lundstrom et al., 2002; Clarke et al., 2002). (See also www.cms.hhs.gov/CLIA.) **Category IB/IC**

I.B. Make preventing transmission of infectious agents a priority for the healthcare organization. Provide administrative support, including fiscal and human resources for maintaining infection control programs (Friedman et al., 1999; Goldmann et al., 1996; Scheckler et al., 1998; Boyce & Pittet, 2002; Larson et al., 2000; Haley et al., 1985; Kretzer & Larson, 1998; O'Boyle, Jackson, & Henly, 2002; Pittet et al., 2000; Murthy, 2001; Rondeau & Wagar, 2002). (See also www.cms.hhs.gov/CLIA.) **Category IB/IC**

> I.B.1. Assure that individuals with training in infection control are employed by or are available by contract to all healthcare facilities so that the infection control program is managed by one or more qualified individuals (O'Boyle, Jackson, & Henly, 2002; Haley et al., 1985; Richards et al., 2001; Stevenson et al., 2004; Emori, Haley, & Stanley,

1980; Morrison & Health Canada, 2004; Simonds et al., 1997). (See also www.cms.hhs.gov/CLIA.) **Category IB/IC**

I.B.1.a. Determine the specific infection control full-time equivalents (FTEs) according to the scope of the infection control program, the complexity of the healthcare facility or system, the characteristics of the patient population, the unique or urgent needs of the facility and community, and proposed staffing levels based on survey results and recommendations from professional organizations (Friedman et al., 1999; Scheckler et al., 1998; O'Boyle, Jackson, & Henly, 2002; Haley et al., 1985; Richards et al., 2001; Pugliese et al., 1984; Morrison & Health Canada, 2004; Stevenson et al., 2004; Richet et al., 2003; Anderson et al., 2006). **Category IB**

I.B.2. Include prevention of healthcare-associated infections (HAI) as one determinant of bedside nurse staffing levels and composition, especially in high-risk units (Mayhall et al., 1979; Goldmann, Durbin, & Freeman, 1981; Arnow et al., 1982; Haley & Bregman, 1982; Fridkin et al., 1996; Robert et al., 2000; Archibald et al., 1997; Harbarth et al., 1999; Jackson et al., 2002; Vicca, 1999; Stegenga, Bell, & Matlow, 2002; Loeb, 2003; Alonso-Echanove et al., 2003; Petrosillo et al., 2001; Needleman et al., 2002). **Category IB**

I.B.3. Delegate authority to infection control personnel or their designees (e.g., patient care unit charge nurses) for making infection control decisions concerning patient placement and assignment of Transmission-Based Precautions (Scheckler et al., 1998; Friedman et al., 1999). (See also http://www.cms.hhs.gov/CLIA/.) **Category IC**

I.B.4. Involve infection control personnel in decisions on facility construction and design, determination of airborne infection isolation room (AIIR) and Protective Environment capacity needs and environmental assessments (Sehulster & Chinn, 2003; American Institute of Architects [AIA], 2006; Harvey, 1998; Srinivasan et al., 2002; Jensen et al., 2005). **Category IB/IC**

I.B.4.a. Provide ventilation systems required for a sufficient number of AIIRs (as determined by a risk assessment) and Protective Environments in healthcare facilities that provide care to patients for whom such rooms are indicated, according to published recommendations (Sehulster & Chinn, 2003; Jensen et al., 2005; AIA, 2006; "Guidelines for preventing," 2000). **Category IB/IC**

I.B.5. Involve infection control personnel in the selection and postimplementation evaluation of medical equipment and supplies and changes in practice that could affect the risk of HAI (Maragakis et al., 2006; Organizations JCAHO, 2007). **Category IC**

I.B.6 Ensure availability of human and fiscal resources to provide clinical microbiology laboratory support, including a sufficient number of medical technologists trained in microbiology, appropriate to the healthcare setting, for monitoring transmission of microorganisms,

planning and conducting epidemiologic investigations, and detecting emerging pathogens. Identify resources for performing surveillance cultures, rapid diagnostic testing for viral and other selected pathogens, preparation of antimicrobial susceptibility summary reports, trend analysis, and molecular typing of clustered isolates (performed either on-site or in a reference laboratory) and use these resources according to facility-specific epidemiologic needs, in consultation with clinical microbiologists (Peterson et al., 2001; Hacek et al., 1999; Rodriguez, Schwartz, & Thorne, 2002; Uyeki, 2003; Mackie, Joannidis, & Beattie, 2001; Peterson & Noskin, 2001; Barenfanger, Drake, & Kacich, 1999; Ginocchio, 2002; Barenfanger et al., 2000; Ramers et al., 2000; National Committee on Clinical Laboratory Standards [NCCLS], 2002; Simor, 2001; McGowan & Tenover, 2004; Pfaller & Herwaldt, 1997; Halstead, Gomez, & McCarter, 2004; Ernst et al., 2004). **Category IB**

I.B.7. Provide human and fiscal resources to meet occupational health needs related to infection control (e.g., healthcare personnel immunization, post-exposure evaluation and care, evaluation and management of healthcare personnel with communicable infections ("Occupational exposure," 2001; Jensen et al., 2005; Bolyard et al., 1998; Pearson, Bridges, & Harper, 2006; Wright, Decker, & Edwards, 1999; Calugar et al., 2006; Diekema & Doebbeling, 1995; Talbot et al., 2005). (See also www.cdc.gov/ncidod/sars.) **Category IB/IC**

I.B.8. In all areas where healthcare is delivered, provide supplies and equipment necessary for the consistent observance of Standard Precautions, including hand hygiene products and personal protective equipment (e.g., gloves, gowns, face and eye protection) ("Occupational exposure," 2001; Boyce & Pittet, 2002). (See also http://www.cms.hhs.gov/CLIA/.) **Category IB/IC**

I.B.9. Develop and implement policies and procedures to ensure that reusable patient care equipment is cleaned and reprocessed appropriately before use on another patient (Sehulster & Chinn, 2003; Rutala & Weber, In preparation; Weems, 1993; Berthelot et al., 1993; CDC, 1999; Rutala & Weber, 2004; Srinivasan et al., 2003; Heeg et al., 2001). (See also www.fda.gov/cdrh/reprocessing/.) **Category IA/IC**

I.C. Develop and implement processes to ensure oversight of infection control activities appropriate to the healthcare setting and assign responsibility for oversight of infection control activities to an individual or group within the healthcare organization that is knowledgeable about infection control (Friedman et al., 1999; Scheckler et al., 1998; Haley et al., 1985). **Category II**

I.D. Develop and implement systems for early detection and management (e.g., use of appropriate infection control measures, including isolation precautions, personal protective equipment [PPE]) of potentially infectious persons at initial points of patient encounter in outpatient settings (e.g., triage areas, emergency departments, outpatient clinics, physician offices) and at the time of admission to hospitals and long-term care facilities (LTCF) (Srinivasan et al., 2004; Bloch et al., 1985; Shen et al., 2004; Gehanno et al., 1999). (See also www.cdc.gov/ncidod/sars.) **Category IB**

I.E. Develop and implement policies and procedures to limit patient visitation by persons with signs or symptoms of a communicable infection. Screen visitors to high-risk patient care areas (e.g., oncology units, hematopoietic stem cell transplant [HSCT] units, intensive care units, other severely immunocompromised patients) for possible infection (Garcia et al., 1997; Hall, 2000; Christie et al., 1995; Bridges et al., 2003; Weinstock et al., 2000). **Category IB**

I.F. Identify performance indicators of the effectiveness of organization-specific measures to prevent transmission of infectious agents (Standard and Transmission-Based Precautions), establish processes to monitor adherence to those performance measures, and provide feedback to staff members (Dubbert et al., 1990; "Occupational exposure," 2001; Avila-Aguero et al., 1998; Babcock et al., 2004; Bloom et al., 2003; Cromer et al., 2004; Braun et al., 2003; Baker, 1997). **Category IB**

Definitions:

Strength of the Recommendations

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CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate planning and management to prevent the transmission of infectious agents in healthcare settings

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

Much of the evidence cited for preventing transmission of infectious agents in healthcare settings is derived from studies that used "quasi-experimental designs", also referred to as nonrandomized, pre- post-intervention study designs. Although these types of studies can provide valuable information regarding the effectiveness of various interventions, several factors decrease the certainty of attributing improved outcome to a specific intervention. These include difficulties in controlling for important confounding variables; the use of multiple interventions during an outbreak; and results that are explained by the statistical principle of regression to the mean, (e.g., improvement over time without any intervention). Observational studies remain relevant and have been used to evaluate infection control interventions.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

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ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1996 Jan (revised 2007 Jun)

GUIDELINE DEVELOPER(S)

Centers for Disease Control and Prevention - Federal Government Agency [U.S.]

SOURCE(S) OF FUNDING

United States Government

GUIDELINE COMMITTEE

Healthcare Infection Control Practices Advisory Committee (HICPAC)

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

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GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from Centers for Disease Control and Prevention (CDC) Web site.

AVAILABILITY OF COMPANION DOCUMENTS

None available

PATIENT RESOURCES

None available

NGC STATUS

This summary was completed by ECRI on April 25, 1999. The information was verified by the guideline developer on November 15, 1999. This NGC summary was updated by ECRI Institute on September 5, 2007.

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Date Modified: 9/22/2008