## **Guidelines for Environmental Infection Control** in Health-Care Facilities

Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee (HICPAC)

U.S. Department of Health and Human Services Centers for Disease Control and Prevention (CDC) Atlanta, GA 30333

4. Parameters of the Laundry Process	100
5. Special Laundry Situations	102
6. Surgical Gowns, Drapes, and Disposable Fabrics	103
7. Antimicrobial-Impregnated Articles and Consumer Items Bearing Antimicrobial Labeling	
8. Standard Mattresses, Pillows, and Air-Fluidized Beds	
H. Animals in Health-Care Facilities	105
1. General Information	
2. Animal-Assisted Activities, Animal-Assisted Therapy, and Resident Animals	
3. Service Animals	
4. Animals as Patients in Human Health-Care Facilities	
Research Animals in Health-Care Facilities	
I. Regulated Medical Waste	112
1. Epidemiology	
2. Categories of Medical Waste	
3. Management of Regulated Medical Waste in Health-Care Facilities	
4. Treatment of Regulated Medical Waste	
5. Discharging Blood, Fluids to Sanitary Sewers or Septic Tanks	116
6. Medical Waste and CJD	
Part II. Recommendations for Environmental Infection Control in Health-Care Facility	ties
	117
A. Rationale for Recommendations	117
B. Rating Categories	
C. Recommendations—Air	118
D. Recommendations—Water	
E. Recommendations—Environmental Services	133
F. Recommendations—Environmental Sampling	
G. Recommendations—Laundry and Bedding	138
H. Recommendations—Animals in Health-Care Facilities	141
I. Recommendations—Regulated Medical Waste	143
Part III. References	145
Part IV. Appendices	201
Appendix A. Glossary of Terms	201
Appendix B. Air	
Airborne Contaminant Removal	210
2. Air Sampling for Aerosols Containing Legionellae	210
3. Calculation of Air Sampling Results	211
4. Ventilation Specifications for Health-Care Facilities	
Appendix C. Water	
1. Biofilms	
2. Water and Dialysate Sampling Strategies in Dialysis	
3. Water Sampling Strategies and Culture Techniques for Detecting Legionellae	
4. Procedure for Cleaning Cooling Towers and Related Equipment	
5. Maintenance Procedures Used to Decrease Survival and Multiplications of Legionella spp. in	
Potable-Water Distribution Systems	
Appendix D. Insects and Microorganisms	
Appendix E. Information Resources	
Appendix F. Areas of Future Research	
Index—Parts I and IV	

II. Laundry Facilities and Equipment

- A. Maintain the receiving area for contaminated textiles at negative pressure compared with the clean areas of the laundry in accordance with AIA construction standards in effect during the time of facility construction. \*\*IZO, 1260–1262\*\* \*\*Category IC\*\* (AIA: 7.23.B1, B2)
- B. Ensure that laundry areas have handwashing facilities and products and appropriate PPE available for workers. Category IC (AIA: 7.23.D4; OSHA: 29 CFR 1910.1030 § d.2.iii)
- C. Use and maintain laundry equipment according to manufacturers' instructions. 1250, 1263

  Category II

D. Do not leave damp textiles or fabrics in machines overnight. Category II

E. Disinfection of washing and drying machines in residential care is not needed as long as gross soil is removed before washing and proper washing and drying procedures are used. *Category II* 

## III. Routine Handling of Contaminated Laundry

- B. Bag or otherwise contain contaminated textiles and fabrics at the point of use. 967 Category IC (OSHA: 29 CFR 1910.1030 § d.4.iv)
  - Do not sort or prerinse contaminated textiles or fabrics in patient-care areas. 967
     Category IC (OSHA: 29 CFR 1910.1030 §d.4.iv)
  - Use leak-resistant containment for textiles and fabrics contaminated with blood or body substances. 967, 1258 Category IC (OSHA: 29 CFR 1910.1030 § d.4.iv)
  - 3. Identify bags or containers for contaminated textiles with labels, color coding, or other alternative means of communication as appropriate. (OSHA: 29 CFR 1910.1030 § d.4.iv)
- C. Covers are not needed on contaminated textile hampers in patient-care areas. Category II
- D. If laundry chutes are used, ensure that they are properly designed, maintained, and used in a manner to minimize dispersion of aerosols from contaminated laundry. 1253, 1267-1270
  Category IC (AAMI: ANSI/AAMI ST65:2000)
  - 1. Ensure that laundry bags are closed before tossing the filled bag into the chute. Category II

2. Do not place loose items in the chute. Category II

E. Establish a facility policy to determine when textiles or fabrics should be sorted in the laundry facility (i.e., before or after washing). \*\*Category II\*

IV. Laundry Process

Choice of A or D

to meet CDC

recommendations

If hot-water laundry cycles are used, wash with detergent in water  $\geq 160^{\circ}F$  ( $\geq 71^{\circ}C$ ) for  $\geq 25$  minutes. Category IC (AIA: 7.31.E3)

B. No recommendation is offered regarding a hot-water temperature setting and cycle duration for items laundered in residence-style health-care facilities. *Unresolved issue* 

C. Follow fabric-care instructions and special laundering requirements for items used in the facility. 

Category II

Choose chemicals suitable for low-temperature washing at proper use concentration if low-temperature (<160°F [<71°C]) laundry cycles are used. \*\*Category II\*\*

\*\*Category II\*\*

E. Package, transport, and store clean textiles and fabrics by methods that will ensure their cleanliness and protect them from dust and soil during interfacility loading, transport, and unloading.<sup>2</sup> Category II

V. Microbiologic Sampling of Textiles

A. Do not conduct routine microbiological sampling of clean textiles.<sup>2, 1286</sup> Category IB