



Overview – PIDAC Environmental Best Practice Document and the Provincial Toolkit

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Objectives

- ☛ To provide an overview of the PIDAC best practice document on Environmental Cleaning
- ☛ To discuss implications for facilities
- ☛ To review the RICN/CAEM/OHHA initiative of developing a provincial toolkit

Background

- Healthcare-Associated Infections (HAIs) occur as a result of healthcare interventions in any healthcare setting
- The environment around the client/patient/resident influences the incidence of infection
 - Cleaning and disinfection reduces the numbers of microorganisms in the healthcare environment
- The goal of cleaning is to keep the environment safe for patients, staff and visitors

- Overcrowding, understaffing, and pressures to move more patients through the healthcare system can challenge the quality of environmental cleaning

About the Document

- Applies to healthcare settings only
- Follows standard PIDAC format
- 3 primary sections + appendices
 - Principles of cleaning and disinfection
 - Best practices for environmental cleaning
 - Cleaning and disinfection practices
 - Appendices
 - Risk stratification for frequency of cleaning
 - audits

Principles of Cleaning & Disinfection

- Evidence for cleaning
- High touch surfaces
- Criteria for selection of finishes/surfaces
- Cleaning agents and disinfectants
- Equipment/product purchases

Definitions

- **Cleaning** – The physical removal of foreign material (e.g. dust, soil) and organic material (e.g. blood, secretions, excretions, microorganisms). Cleaning physically removes rather than kills microorganisms. It is accomplished with water, detergents and mechanical action.
- **Disinfection** – The inactivation of disease-producing microorganisms. Disinfection does not destroy bacterial spores. Medical equipment/devices must be cleaned thoroughly before effective disinfection can take place.

Key Concepts

- Client/patient/resident environment
 - Varies based on healthcare setting
- Surfaces touched by patient more frequently carry a heavier load of microorganisms
- Type of surface and finish impact the ability to clean and/or disinfect

- ☛ Cleaning/disinfection should be done as soon as possible after any item has been used
- ☛ Disinfecting products used in the health care
 - ☛ must be approved by Environmental Services, Infection Prevention and Control and Occupational Health and Safety
 - ☛ must have a drug identification number (DIN) from Health Canada
 - ☛ must be used according to the manufacturers' recommendations for dilution, temperature, water hardness and use; and
 - ☛ must be used according to the product's Material Safety Data Sheet (MSDS).

Best Practices

- ☛ Principles of IP&C related to cleaning
- ☛ Cleaning of client/patient/resident areas
- ☛ Laundry and bedding
- ☛ Waste management/sharps
- ☛ Care and storage of supplies/utility rooms
- ☛ Education
- ☛ Assessment of cleanliness
- ☛ OHS issues related to environment

Key Concepts

- ☛ Routine Practices
- ☛ Hotel Clean and Hospital Clean
- ☛ PPE
- ☛ Additional Precautions
- ☛ Resources/contracted services
- ☛ Frequency of routine cleaning
- ☛ Non-critical equipment and devices

- Laundry and bedding
 - Management
 - Staff protection
- Waste and sharps
 - Waste streams, collection, storage, and disposal
 - Handling of sharps
- Care and storage of cleaning supplies and utility rooms
- Construction and containment
 - floods

- New/evolving technologies
 - Microfibres
 - Fogging
 - UV irradiation
 - Steam vapour
- Education
- Assessment of cleanliness and quality control
 - Measures
 - Visual assessment
 - Residual bioburden

- OHS
 - Immunization
 - Staff exposures
 - Work restrictions
 - Chemical safety

Cleaning and Disinfection Practices

- Routine healthcare cleaning practices
- Cleaning and disinfection – additional precautions
- Cleaning spills and body substances

Key Concepts

- General cleaning practices
- Cleaning methods
 - Daily routine cleaning
 - Scheduled cleaning
 - Terminal/discharge cleaning
- Bathroom cleaning
- Floor cleaning

- Equipment and specialized item cleaning
 - Electronic equipment
 - Ice machines
 - Playrooms/toys
 - Transport equipment
- Surgical/sterile settings
 - Operating Rooms
 - Reprocessing
 - Laboratories
 - Dialysis centres
 - Nurseries/NICU

- Cleaning frequencies and levels of cleaning and disinfection
- Cleaning – patients on Additional Precautions
 - Contact precautions – VRE, MRSA, *C. difficile*, norovirus
 - Droplet precautions
 - Airborne precautions
- Cleaning spills of blood and body substances

- Appendices**
- Risk stratification matrix for frequency of cleaning
 - Visual assessment of cleanliness
 - Sample checklists and audit tools
 - Advantages/disadvantages of hospital-grade disinfectants and sporicides

- Risk Stratification Matrix**
- Step 1: Categorize factors that will impact on environmental cleaning
 - Probability of contamination with pathogens
 - Vulnerability of population to environmental infection
 - Potential for exposure

Probability of contamination

- ☛ Heavy – surfaces/equipment routinely exposed to copious amounts of fresh blood or other body fluids (e.g. birthing suite, ER, bathrooms if visible soil)
- ☛ Moderate – surfaces/equipment does not routinely (but may) become contaminated with blood or body fluids (all bathrooms)
- ☛ Light – surfaces not exposed to blood or other body fluids or items that have contact with these (e.g. lounges, libraries, offices)

- ☛ Vulnerability
 - ☛ More susceptible – those who are susceptible to infection due to medical condition or lack of immunity
 - ☛ Less susceptible – all other individuals and areas
- ☛ Potential for exposure
 - ☛ High-touch surfaces – that that have frequent contact with hands
 - ☛ Low-touch surfaces – those that have minimal contact with hands

Step 2: Determine the total risk stratification score

Probability of Contamination with pathogens	High-touch surfaces (score = 3)		Low-touch surfaces (score = 1)	
	More susceptible Score=1	Less susceptible Score=0	More susceptible score=1	Less susceptible Score=0
Heavy Score=3	7	6	5	4
Moderate Score=2	6	5	4	3
Light Score=1	5	4	3	2

Step 3: Determine the cleaning frequency based on risk stratification matrix

Total Risk Score	Risk Type	Minimum Cleaning Frequency
7	High Risk	Clean after each case/event/procedure and at least twice per day Clean additionally as required
4-6	Moderate Risk	Clean at least once daily Clean additionally as required (e.g. gross soiling)
2-3	Low Risk	Clean according to a fixed schedule Clean additionally as required (e.g. gross soiling)

The Toolkit

- Partnership between:**
- Regional Infection Control Networks
 - Canadian Association of Environmental Managers
 - Ontario Hospital Housekeepers Association



Background

- Canadian Association of Environmental Management (CAEM) and Ontario Healthcare Housekeepers Association (OHHA) provided input into BP document
- Both organizations have also provided forums for introduction of the document
 - Can Clean – April 2008 and 2009
 - Red/White and Green Conference – October 2009
 - OHA Convention – November 2009
- Regional Infection Control Networks (RICNs) support education and training on PIDAC best practices (BP) across all sectors within their regions

Environmental Cleaning BP Project Team

Core Members:

- Nora Boyd, Erie-St. Clair Infection Control Network (ESCICN)
- Glenda Kaufmann, President Ontario Healthcare Housekeepers Association (OHHA)
- Brenda Smith, Central West Infection Control Network (CWICN)
- Keith Sopha, President Canadian Association of Environmental Management (CAEM)
- Liz van Horne, Ontario Agency for Health Protection & Promotion (OAHPP)
- Grace Volkening, Central Region Infection Control Network (CRICN)
- Sarah Cox, Ministry of Health & Long-Term Care (MOHLTC ex-officio)
- Dr. David Sheridan, Facilitator

Deliverables/Project Plan

- To create and provide educational tools for use with front-line cleaning staff
- To provide train-the-trainer sessions for ES management/supervisory staff and others designated as trainers by the facilities
- To provide other resource materials as necessary to ensure all facilities have most up-to-date versions of PIDAC Best Practices documents
- To identify barriers to success and highlight issues beyond our control to the appropriate agency e.g. MOHLTC
- To evaluate the training program in hospitals and long term care

Project Update

- On-line survey issued to ~ 300 CAEM and OHHA members in December 2009 to determine:
 - Perceptions of environmental managers around best practices
 - Preferred methods for teaching front-line environmental staff
- 147 responses received which helped inform the project plan
- Workshop convened December 18th and 19th with healthcare environmental services representatives from across Ontario
 - Reviewed survey results
 - Discussed teaching methods and tools
 - Developed draft Curriculum Outline
- Two task groups responsible for content development – in progress

Curriculum Outline

- Leader's Guide + Six modules
 - Module One: Chain of Transmission
 - Module Two: Safety
 - Module Three: Cleaning Products and Tools
 - Module Four: General Cleaning
 - Module Five: Additional Precautions and Specialized Cleaning
 - Module Six: Audit

Training Toolkit

Planned tools include:

- Presentation modules
- Demo video clips
- Summary sheets
- Posters
- Audit tools
- Quizzes



Progress/ Next Steps

- Content currently under development
- Materials will be vetted by ES representatives
- Mass production of materials and tools
- Mass distribution of "toolkits" to all healthcare facilities in Ontario – planned Summer/Fall 2010
- Train-the-trainer sessions through the RICNs



Questions?


