

# Child Health Patient Safety Organization

## Patient Safety Action Alert

April 2017



### *Take Action to Reduce Risk of Similar Harm*

## Disinfection of Clinicians' Personal Medical Devices to Prevent the Spread of Organisms

### Resultant Harm

The lack of consistent disinfection of clinicians' personal medical devices can lead to the spread of organisms causing outbreaks of infections within medical facilities. Healthcare-associated infections can occur in patients, employees, families and/or visitors. For patients, infection can lead to worsening of clinical status, escalation in care or death. In addition, patients with compromised medical conditions are more susceptible to contracting these organisms or suffering more serious consequences from infection.

### Fundamental Issue

Personal medical devices (e.g., stethoscopes, ophthalmoscopes, otoscopes) can spread organisms to patients if these devices are not disinfected properly between patient encounters (e.g., bedside examinations/procedures). Clinicians may be unclear on which personal medical devices should be disinfected and the recommended disinfection practices (e.g., appropriate cleaning agents, contact times of cleaning agents) for these devices. In addition to disinfecting the actual device, clinicians should properly disinfect the device storage case, as the case could be a reservoir for organisms. Inconsistent disinfection practices within medical facilities can lead to significant harm to patients. Organizations should develop standardized practices, job aides and real-time reminders for clinicians related to the disinfection of personal medical devices.

### Action to Mitigate Risk of Similar Harm at Your Hospital

- Identify all personal medical devices in use and determine appropriate disinfection classification (non-critical, semi-critical or critical) for each device.
- Use approved cleaning agents for the appropriate level of disinfection (e.g., low-level, high-level, sterilization).
- Follow manufacturer's instructions for use (IFU) of the device and the cleaning agent to ensure proper disinfection and to avoid damage to medical equipment.
- Develop clear practice guidelines that:
  - Identify all personal medical devices in use that may come into contact with intact skin and mucous membranes.
  - Instruct clinicians how to disinfect personal medical devices.
  - Consider special circumstances (e.g., treating patients with *C. difficile* infection), which may require alternative disinfection requirements.
  - Determine the timing and frequency of when devices must be disinfected.
- Raise awareness by disseminating information emphasizing the importance of disinfecting personal medical devices.
  - Consider including disinfection guidelines for other personal devices (e.g., cell phone, tablet, pager) when disseminating to clinicians.

### What can I do with this alert?

- Forward to the recommended target audiences for evaluation.
- Include in your Daily Safety Brief.
- Create loop-closing process for evaluating risks and strategies implemented to decrease risk of repeat harm.
- Let us know what is working and what additional information you need.

**Leverage your PSO membership**  
Learn from each other to reduce patient harm and Serious Safety Events.

### Target Audiences

- Infection Prevention and Control
- Nursing Leaders
- Medical Leaders
- Clinical Leaders
- Patient Safety
- Emergency/Urgent Care
- Specialty Care Services
- Quality Improvement
- Legal/Risk Management
- Clinical Educators
- Organizational Leaders
- Ambulatory Care
- Primary Care

## Definitions

- **Noncritical Items:** “Are those that come in contact with intact skin but not mucous membranes.”<sup>1</sup>
  - **Low-Level Disinfection:** “Low-level disinfectants can kill most vegetative bacteria, some fungi, and some viruses in a practical period of time (<10 minutes)”.<sup>1</sup>
- **Semicritical Items:** “Contact mucous membranes or nonintact skin. This category includes respiratory therapy and anesthesia equipment, some endoscopes, laryngoscope blades, esophageal manometry probes, cystoscopes, anorectal manometry catheters, and diaphragm fitting rings. These medical devices should be free from all microorganisms; however small numbers of bacterial spores are permissible.”<sup>1</sup>
  - **High-Level Disinfection:** “A few disinfectants will kill spores with prolonged exposure times (3-12 hours); these are called chemical sterilants. At similar concentrations but with shorter exposure periods (e.g., 20 minutes for 25 glutaraldehyde), these same disinfectants will kill all microorganisms except large numbers of bacterial spores”.<sup>1</sup>
- **Critical Items:** “Confer a high risk for infection if they are contaminated with any microorganism. Thus, objects that enter sterile tissue or the vascular system must be sterile because any microbial contamination could transmit disease. This category includes surgical instruments, cardiac and urinary catheters, implants, and ultrasound probes used in sterile body cavities.”<sup>1</sup>
  - **Sterilization:** “Destroys or eliminates all forms of microbial life and is carried out in health-care facilities by physical or chemical methods. Steam under pressure, dry heat, EtO gas, hydrogen peroxide gas plasma, and liquid chemicals are the principal sterilizing agents used in health-care facilities”.<sup>1</sup>
- **Contact Time:** “Time a disinfectant is in direct contact with the surface or item to be disinfected. For surface disinfection, this period is framed by the application to the surface until complete drying has occurred”.<sup>1</sup>

## Additional Resources (Note: Some resources may require a subscription to access.)

- Contact the manufacturer or follow the manufacturer’s instructions for use (IFU) for proper cleaning of personal medical equipment used by your institution for practice recommendations.
- Refer to your organizations Infection Prevention and Control policies and procedures.
- Centers for Disease Control and Prevention (CDC)  
<https://www.cdc.gov/infectioncontrol/guidelines/disinfection/index.html>
- Association for Professionals in Infection Control and Epidemiology (APIC)  
<http://www.apic.org/>
- United States, Department of Labor, Occupational Safety and Health Administration (OSHA). Hospital eTool: <https://www.osha.gov/SLTC/etools/hospital/index.html>
- 2015 Red Book chapter on Infection Prevention and Control in the Hospitalized Child <https://redbook.solutions.aap.org/>
- The Society for Healthcare Epidemiology of America <http://www.shea-online.org/>
- The Infectious Diseases Society of America  
[https://www.idsociety.org/practice-guideline/practice-guidelines/#/+/0/date\\_na\\_dt/ desc/](https://www.idsociety.org/practice-guideline/practice-guidelines/#/+/0/date_na_dt/ desc/)
- Infection Prevention in the Era of Mobile Communication Devices  
[https://www.aap.org/en-us/Documents/soid\\_newsletter\\_2016\\_fall.pdf](https://www.aap.org/en-us/Documents/soid_newsletter_2016_fall.pdf)

<sup>1</sup> Rutala, W. A., Weber, D.J., Healthcare Infection Control Practices Advisory Committee. (2008). Guidelines for Disinfection and Sterilization in Healthcare facilities. U.S. Health and Human Services, Centers for Disease Control and Prevention. Retrieved from [https://www.cdc.gov/hicpac/pdf/guidelines/Disinfection\\_Nov\\_2008.pdf](https://www.cdc.gov/hicpac/pdf/guidelines/Disinfection_Nov_2008.pdf).

## Has a patient experienced an event at your organization that could happen in another hospital?

- Child Health PSO members should submit event details into the [Child Health PSO portal](#).
- Contact Child Health PSO Staff to share risks, issues to assess, and mitigation strategies with member hospitals.

*More than 50 children’s hospitals are actively engaged with Child Health PSO. We currently are enrolling new members.*

## Contact Us

[psosupport@childpso.org](mailto:psosupport@childpso.org)

*This alert is approved for general distribution to improve pediatric safety and reduce patient harm. This Alert meets the standards of non-identification in accordance with 3.2.12 of the Patient Safety Quality Improvement Act (PSQIA) and is a permissible disclosure by Child Health PSO.*