

Infection Control: Best Clinical Practices



Infection Control: Best Clinical Practices

- This course is worth 1/1 CEU credit
- You must stay logged on for the entire session
- You must successfully complete a short multiple-choice quiz



Infection Control: Best Clinical Practices

- If you are having technical difficulties, please stay logged on and contact Audiology Online at 8—753-2160, ext. 3.



Infection Control: Best Clinical Practices

- Agenda
 - What is infection control?
 - Infection control in the hearing aid dispensing practice
 - Universal precautions



What is infection control?

- ‘.....conscious management of the clinical environment for purposes of minimizing or eliminating the potential spread of disease’

Bankaitis & Kemp, 2003, 2004



Why has Infection Control become a hot topic?

- Emergence of AIDS in 1980's
- New disease or virus threats such as H1N1



Infection Control in the Dispensing Clinic

Nature of Dispensing

- Use tools through the day that will come in contact with a variety of individuals
- Staff and patients

Scope of Practice

- See a variety of individuals through the day, many may have health concerns that may not be readily obvious

Varied Patient Load

- Old, young, healthy, sick....



Hazmat anyone?



Contact Transmission

• Direct Contact

- direct contact w/o intervening persons, barriers or conditions



• Indirect Contact

- microbe is transferred from a secondary surface



• Droplet

- transmission through particles expelled via coughing and sneezing



Modes of Transmission

• Vehicle

- through contaminated food, water or bodily substances such as cerumen



• Airborne

- through the air via droplets or particles



• Vectorborne

- insects or animals transfer pathogenic agents



Routes of Transmission




Cerumen

- Cerumen is the bodily substance known as ear wax
- Not an infectious agent unless it becomes contaminated with mucus or blood
- Cautions associated with Cerumen
 - always be treated as an infectious substance because the hearing professional cannot make a determination of the content just by visual inspection.




Opportunistic Infection

- Hallmarks of immunocompromise
 - Immune systems such as the very young, elderly or those with reduced immune capacity such as the HIV
- Ubiquitous organisms
 - Commonly found in our environment and gain access to the body via the standard routes
- Infect an immunocompromised system
 - If we are not using appropriate infection control




Infectious Diseases

- AIDS
- Diabetes
- Type I
- Type II
- Hepatitis
- Hepatitis B
- SARS (Severe Acute Respiratory Syndrome)
- Tuberculosis




Infectious Diseases

- **External Ear Canal-prone to infection: is more prone to infection than any other skin surface**
- **Cerumen's Role**
 - inhibit microbial growth
- **External Ear Canal and moisture**
 - As the ear canal retains moisture, the ear canal's ph level changes to a more neutral or alkaline level, one that is more conducive to bacterial or fungal growth



“Is there something growing on that hearing aid?”


Common Opportunistic Infection	Hearing Disorder or Disease
• Mycobacterium	• Otitis Media, Otitis Externa, Polyps
• Staphylococcus aureus	• Otitis Media
• Pseudomonas	• Otitis Externa



Infectious Microbes found on Hearing Aids


Bankaitis (2002) Hearing aid-related Infection Control

Recovered Microbe	Associated infections or diseases
• Aspergillus flavus	infection of tissues, mucousal surfaces, or otitis
• Candida parapsilosis	chronic mucocutaneous candidiasis
• Coag neg staphylococcus	furuncles, boils, bacteremia, endocarditis, pneumonia, osteomyelitis
• Enterococcus	urinary tract infections
• Pseudomonas aeruginosa	chronic otitis media, otitis externa, malignant otitis externa



Universal Precautions

- **Personal Protective Equipment**
- **Hand Hygiene**
- **Clean/Disinfect Surfaces**
- **Sterilize Critical Instruments**
- **Appropriate Waste Disposal**




Universal Precautions I: Personal Protective Equipment

- Safety Glasses 
- Masks 
- Gowns 



Gloves

- Worn in appropriate situations
 - Open wounds or visible blood is present
 - Cleaning or disinfecting instruments contaminated with bodily substances
 - Submersion or removal of instruments into or from cold sterilant
 - Hands are likely to become contaminated with potentially infectious materials (including cerumen)



Gloves

- Appropriate Fit



Properly fit glove




Improperly fit glove




Gloves

- One-time use items
- Inappropriate use leads to cross contamination




Universal Precautions II: Hand Washing

- Hand Washing must occur:
 - Patient Appointments
 - Glove Removal
 - As Needed



Proper Hand Hygiene Techniques

1. Wet your hands with water and apply soap. 
2. Rub hands together to make a lather. 
3. Rub your palms, fingers, and back of your hands. 
4. Rub your hands really well for at least 20 seconds. 
5. Rinse hands with water. 
6. Dry hands using paper towel or an air dryer. 



Proper Hand Hygiene Techniques: No Rinse Agents

- Remove all jewelry
- Squeeze appropriate amount of “no rinse” into the palm
- Rub hands together, rubbing in between fingers as well
- Continue to rub until the solution dries, do not use a towel to dry hands when using a no rinse product



Universal Precautions III: Clean & Disinfect Surfaces



Cleaning & Disinfecting

- **Cleaning**
 - removal of gross contamination from contaminated instruments and areas without necessarily killing the germs
- **Disinfection**
 - kills a percentage of the germs
 - EPA approved hospital grade disinfectant
- **Sterilization**
 - involves killing 100% of the germs, including endospores



Disinfectants

Hospital Grade

- Liquid
- Spray
- Towelette

“Non-critical” items

- headphones
- earmolds
- instruments and surfaces that are not contaminated with blood, ear drainage, cerumen or bodily fluids



Sterilization

- **Critical Instruments**
 - those that come in contact with bodily substances
 - curettes, specula, immittance and OAE tips
- **Sterilization-options**
 - Autoclave
 - common in the dispensing office-cold sterilization which means soaking instruments in EPA-approved solutions for a certain number of hours.



Infectious Waste Disposal

• Infectious Waste in the work environment

- typically be cerumen
- disposed of in regular trash receptacle and discarded as typical trash

In case of significant amount of blood.....

- disposed of in separate package and care taken to prevent cleaning staff having casual contact with these materials



Engineering and Work Controls

- **Engineering Controls:** procedures that isolate or remove bloodborne pathogen hazards from the workplace
 - storage of re-usable instruments that will be sterilized at the end of the day
 - specific room for sterilization procedures
 - labeling area as hazardous



Engineering and Work Controls

- **Work Controls:** profession specific procedures performed to reduce the risk of cross contamination
 - wearing appropriate barriers like gloves
 - altering the manner in which procedures are performed, such as cerumen management, to reduce risk



Material Safety Data Sheets (MSDS)

- **MSDS:** informational label that outlines hazards associated with the use of chemical products found in our work environment



Material Safety Data Sheets (MSDS)

- **MSDS:** obtained from the manufacturer
 - OSHA requires that these forms should be stored in close proximity to where the materials are used
 - MSDS sheets are available for products sold by Starkey
 - impression material, monomer, polymer, and adhesives
 - Contact Customer Service to obtain MSDS sheets for these products.



Occupational Safety & Health Administration (OSHA)

- OSHA: the regulatory agency responsible for implementation of safety protocols in the workplace
- Requires a written infection control plan in a healthcare setting



OSHA Requirements

1. Employee Exposure Classification
2. Hepatitis B (HBV) Vaccination Plan and Records of Vaccination
3. Training Plan and Records
4. Implementation Protocols
5. Post Exposure Plans and Records



Employee Exposure Classification

Category I: Clinical Audiologists

Category II: Clinical Audiologists, Dispensing Audiologists, Hearing Instrument Specialists, Student Intern, Clinical Supervisor, Patient Care Coordinator

Category III: Administrative Staff



Employee Exposure Classification

Category I & II are required to practice infection control procedures



Hepatitis B (HBV) Vaccination and Records

Hepatitis B is the most common form of Hepatitis

- 1 in 20 persons in US exposed
- Health care workers routinely exposed



Hepatitis B (HBV) Vaccination and Records

All Category I & II employees are to be offered the HBV vaccination at no charge

- Employer will maintain records for duration of employment plus 30 years



Training Plan & Records

OSHA mandates a training plan and record keeping protocol



Training Plan & Records

- Initial Training: occur within 90 days of employment
- Annual Training: reinforcement of information and update anything new
- Records: training records for each employee to be kept



Implementation Protocols

- OSHA requires a development of a protocol for use in cases of exposure
 - Ex: what to do in case of a fall, nosebleed or vomiting
 - Includes directions to avoid touching of bodily fluids and blood



Post-Exposure Plan and Records

- If exposure occurs, follow-up is required
 - Confirm if transfer of disease has or has not occurred
 - If needed, begin treatment
 - Confirm outcome of treatment



Post-Exposure Plan and Records

- Records of the exposure need to be kept
 - Circumstances of the exposure
 - Route of exposure
 - Treatment
 - Outcome of treatment



Implementation of Infection Control Plan

- All staff need to understand infection control and be able to implement the plan
 - Clinical Staff
 - Administrative Staff
- Achieved through proper training, cleaning, disinfecting and sterilizing



Best Practices in the Dispensing Office

- Wash hands before/after patient contact
- Clean tools/earphones after each use
- Use storage device to accept hearing aids from patient and transfer them about the office
- Use personal Protective Equipment when handling/modifying hearing instruments



Infection Control FAQ's

- Is bar soap acceptable for hand hygiene procedures?
 - No. Medical grade, liquid soap in a closed container



Infection Control FAQ's

- Why is it inappropriate to top off a liquid soap container?
 - It can lead to contamination of the soap



Infection Control FAQ's

- Why do I have to implement hand hygiene procedures after the removal of gloves?
 - Gloves may be contaminated



Infection Control FAQ's

- Do I always wear gloves when handling hearing aids or impressions?
 - No. If the aid has been cleaned and disinfected, gloves are not necessary. In some cases, it may be more practical to wear gloves.



Infection Control: Best Clinical Practice

- Dispensing practices
 - Considered healthcare providers
 - Thus under OSHA



Infection Control: Best Clinical Practice

- Best Clinical Practices
 - Requires following OSHA standards for infection control



Infection Control: Best Clinical Practice

- Universal Precautions
 - Follow recommendations for protection
 - Hand washing
 - Cleaning, disinfecting and sterilizing



Infection Control: Best Clinical Practice

- Implementation
 - Infection control plan
 - Training of staff
 - Record keeping
 - Follow-up



Infection Control: Best Clinical Practice

Thank you!

