Infection control in Audiology practice

INFECTION CONTROL

- Infection Control can be define as an organized effort to manage one's environment in order to minimize exposure to micro-organisms which may make you or your patients sick (Kemp & Roeser 1998)

- Regardless of whether the organism is a bacteria, fungus, or virus, **the goal of infection control is** to reduce or eliminate opportunities for direct or indirect transmission of microorganisms from person to person (Kemp & Bankaitis, 2000a; Kemp & Bankaitis, 2000b)

Importance of infection control

- Infection control is an important health care issue that affects many aspects of clinical practice.
- In all places that deliver health services, it's the professionals' responsibilities to ensure patients' safety, audiologists are one of those.
- Audiologists should provide their patients with diagnostic and treatment environments that are free of disease transmission and they should focus their efforts to control the infectious diseases within their clinical sittings.

- Audiological diagnostic and rehabilitative services are sought by a variety of patients with different ages, diseases, socioeconomic status that all have different effects in their immune systems' resistance against different infectious micro-organisms.

- Infection control in audiology practice is vital, because the audiology world has an environment with various contaminated objects that come in either direct or indirect contact with multiple patients.

- (e.g.: headphones, immittance or otoacoustic emissions probe tips, electrodes, otoscope specula, oto-lights, earmold impression syringes, probe tubes for real-ear measurement, earmolds and/or hearing aids).

- The most common mean of disease transmission is occurs when the patient or the clinician touches another person or object and this is very common in audiology practice. **Example;**

- Putting on and removing the HA from patients' ears encourage accidental infection transmission as at this point the microbe will seek for natural entry to the body.

- The audiology practice has expanded in the last couple of years and put the audiologists at greater risk from positional exposure to blood and other body fluids;

- Audiologists nowadays not just observing in the operation room but insertion and removal of **needle electrodes.**

- **Cerumen** is not an infectious agent unless it infected with blood or mucus and since it's not possible to distinguish the presence of blood or mucus due its color, it should be always treated as an infectious substance.

Routs of disease transmission

- There are **4 routs** for micro-organisms transmission:

1. **Contact transmission**, direct or indirect.
2. **Vehicle transmission**, refer to diseases transmitted by contaminated items including food (i.e. salmonellosis) or water (i.e. legionellosis).
3. **Airborne transmission**, refers to the distribution of infectious agents by air
4. **Vectorborne transmission**, when an animal or insect carries the pathogen, infecting the susceptible host (mosquitoes transmitting Malaria)

- **Contact transmission** forms the **most common** mood of disease transmission in audiology practice (Kemp & Bankaitis, 2000b).

  - Direct contact transmission: like when the audiologist touches the patient ear with unwashed hands.
  - Indirect transmission: like when the hearing health professional take the patient's HA with naked hand from the patient's hand.

Basic infection control guidelines in audiology

- **Exposure classification:** Each employee is classified on the basis of potential exposure to blood and other infectious substances
- **Record of** Hepatitis B vaccination and records of **vaccination**
- Plan for **annual infection control training** and records of training
- **Implementation protocols:** Actual steps that will be taken in your office to observe universal precautions
- **Post-exposure plan and records**

http://www.audiologyonline.com/articles/infection-control-in-audiology-1299
Accessed 19/08/2013

General House keeping and environmental infection control

- Environmental infection control involves different aspects; cleaning, disinfecting, sterilizing and disposables.

- Each of this aspect different from the other; cleaning materials are not disinfecting and so on..

- **cleaning:**

- it’s the process of removing the gross contaminated without killing the germs
- It’s an important process prior to the disinfecting and sterilizing
- It can done with wipe, brush…

Disinfecting:

- It's the process of killing part of the germs, this number depends on the disinfectant material used.
- It's acceptable in "non-critical" items, those which are not in touch with blood or other infectious substances or those can't break the skin.
- E.g. earmolds, hearing aids worn in the ear or canal, supra-aural headphones, otoscope specula, probe tips and tubes, ABR and ENG electrodes…

- Surfaces in work areas should be disinfected regularly
- Repair benches where earmolds and hearing aids are cleaned should be routinely disinfected.
- Motivation devices and small children toys should also disinfected

Sterilizing:

- It's the process of killing 100% of the vegetative microorganisms and their endospores 100 percent of the time
- If the spore is not killed it may become vegetative again and cause disease
- It's indicated when an object is contaminated with a potentially infectious material such as blood, mucous or other bodily fluid or substance
- Objects that are capable of breaking the skin, (i.e. curettes, wax loops) must be sterilized prior to re-use regardless of contamination.

- Motivation devices and small children toys should also disinfected
- Cold sterilization with chemicals is the recommended procedure.
- Cold sterilization is accomplished by soaking instruments in 2% glutaraldehyde for ten hours or in 7.5% hydrogen peroxide.

Disposable:

- including otoscope specula, immittance and OAE probe tips, earmold impression syringe tips, insert receivers, infection control earphone covers, and probe-microphone tubes.
- All disposables should be used as directed.

Infection control basics

- **Medical case history**

- **Hand hygiene**

✓ Hands should be washed with hospital grade antibacterial soap and water immediately before AND after each patient.

✓ The Centers for Disease Control and Prevention (2002) has recommended that the use of fast-drying rub-on alcohol gels replace the traditional soap and water hand washing that is recommended be done routinely before and after each patient.

- **Using Gloves:**

- ✓ It is recommended that gloves be worn during cerumen management procedures including irrigation of the ear.
- ✓ In addition, gloves should be worn whenever the patient has a draining ear, when blood is present, when sores or lesions are evident on the ear or scalp or when a medical history indicates an infectious disease
- ✓ At a minimum, gloves should be worn when cleaning up spills of infectious waste and while disinfecting a contaminated area.

- **Protective apparel**

- ✓ Safety glasses and disposable masks are necessary when there is risk of splash or splatter of potentially infectious material, or when the clinician/patient is at risk of airborne contamination. Like during the cermun removal.

- **Waste management**

- ✓ Waste (gloves, wipes, paper towels etc.) contaminated with blood or ear drainage or cerumen containing blood or ear drainage can be placed in the regular trash unless the blood or mucous is significant in amount.

- ✓ Materials containing significant amounts of blood should be disposed of in waterproof bags labeled with the biohazard symbol.

- Sharp instruments such as needles, scalpel blade, and anything like them must be disposed of in a sharps box, a plastic container that can not be easily penetrated and is, therefore, designed to minimize contact with sharp objects.

- Sharp boxes should be labeled as a biohazard and they should be handled by a licensed waste disposal company.

- **Vaccination**

- ✓ Measles, mumps, rubella, tetanus, influenza, tuberculosis, small pox, polio, pertussis (whooping Cough), diptheria, hepatitis A and hepatitis B are all preventable through vaccination.


SAFE
DISEASE
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PETS
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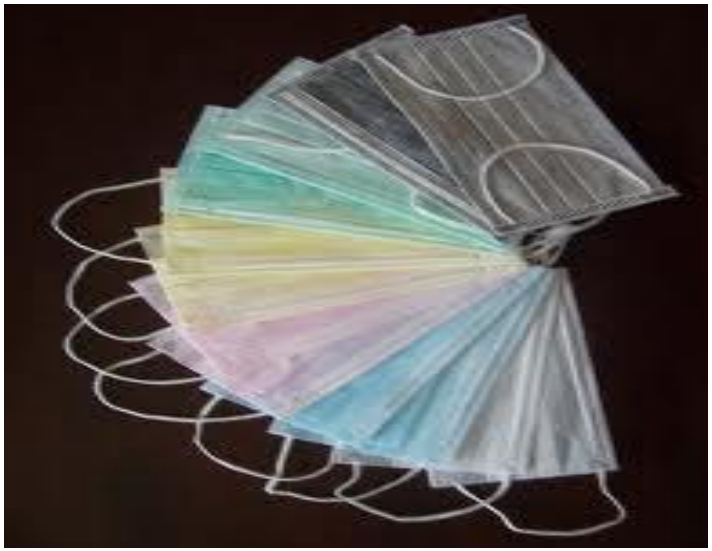
DIRTY
PUBLIC
BACTERIA
TOWEL
WIPES
FAUCET
CARE
GELS
FOAM
CLEANER
PALM
CHEMICAL
HYGIENE
FINGERS
RUB
AIR DRY
RINSE
SOAP
PREVENT
BASIN
NaOH
HEALTH
TOILET
SNEEZE
GERMS
BACTERIUM
INFECTIONS
DESTROY
DISEASE
WASH
DANGER
LIQUID SOAP
IMPORTANT
VIRUS
WASHING
RUB
WC
SANITIZER
WATER
ANTIBACTERIAL
HYGIENE
GERMS
CLEAN


NITRILE
NITRILE DISPOSABLE GLOVES
LATEX
VINYL
LATEX EXAM GLOVES
VINYL EXAM GLOVES


BIOHAZARD



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