

# Infection Control in Doctors' Offices

Jim Gauthier, MLT, CIC

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## Infection Control in Doctors' Offices

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Hosted by Paul Webber  
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## Objectives

- Discuss Routine Practices
  - Need for additional precautions
  - Post SARS lessons
- Look at the issues of the physician's office
  - Regular cleaning, sanitizing
  - Disinfection
  - Sterilization
  - Risks

## Jim's Basics

- We are buggy people
- Our patients are buggy people
- Some have fancy names
  - *Stenotrophomonas maltophilia*
- Others get the label "Superbug"
  - MRSA, VRE, *C. difficile*

## Jim's Basics

- Never forget we need a mode of transmission!
  - Hands
  - Equipment
  - Coughing/Sneezing/Snorting

## Routine Practices

- Also known as Standard Precautions
  - Adapted from Universal Precautions, and Body Substance Precautions
- Premise: assume all patients are infectious
  - Blood and body fluids, excretions, secretions or any object soiled with these substances

## Routine Practices - Hands

- Hand Hygiene
  - Soap and water
    - Requires a minimum of 10 – 15 seconds to adequately remove transient flora and soil
    - Very technique dependent
    - Red finger paint check!!

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## Routine Practices - Hands

- Antibacterial Soap
  - Triclosan, chlorhexidine, PCMX
  - Used before invasive procedures
  - Leaves residue on hands, can be irritating
  - Routine in a General Practice?
    - Not sure!

## Routine Practices - Hands

- Hand Sanitizers
  - Alcohol based products
  - Easier on hands than soap and water
  - Use on visibly clean hands
    - If soiled, must wash!
  - Hands should be wet for 15 – 20 seconds
    - I like to use two pumps of product
  - Gel vs. liquid formulations

## Routine Practices - Hands

- Alcohol and C. difficile
  - Many authors and facilities are recommending not to use alcohol if C. difficile is suspected.
    - If hands soiled – WASH, don't use alcohol
    - If no contact with feces is this still applicable?
    - If contact with feces with gloves on, is this still applicable?
  - The debate will continue!
  - Is C. difficile there or not?

## Routine Practices - Masks

- For Physician and staff
  - At minimum a procedure mask or surgical mask with febrile, coughing patients
  - Eye protection is also necessary



## Routine Practices – Masks

- If TB, measles or chickenpox is suspected, an N95 or equivalent mask is required.
- If immune to measles and chicken pox, not required



## Routine Practices – Masks

- Ask patient to wear a mask
  - Limits soiling of environment
  - If not able, provide tissues to cover coughs and sneezes



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## Routine Practices – Gloves

- Used for contact with, or anticipated contact with blood or body fluids
- Must be used appropriately to protect environment



## Routine Practices – Gloves

- Keep task specific
- Really not required if touching intact skin
- Wash or sanitize hands after removal
- Latex allergies on increase
  - Vinyl and Nitrile now more widely used
  - Neoprene also coming into it's own

## Routine Practices – Gowns

- Used if chance of soiling clothes
  - Plastic aprons
  - Cover gowns
- Need to be "single patient use"

## Additional or Transmission Based Precautions

- Acute Care has Contact, Droplet and Airborne precautions
- Ongoing discussion to Non-acute settings
  - Long term care
  - Complex continuing care
  - Physician's office

## Contact Precautions - Organisms

- Methicillin Resistant *Staphylococcus aureus* (MRSA)
- Vancomycin Resistant Enterococci (VRE)
- *Clostridium difficile* (CD)
- Antibiotic Resistant Organisms (ARO)

## Contact Precautions – Acute Care

- Gown and gloves for all contact with patient
  - If patient is not soiling the environment, is this necessary?
    - Research indicates it does limit spread
  - Any patient soiling the environment
    - Use gown, gloves, face protection
    - Clean in a standard manner (more later)

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## Doctor's Office

- Any patient soiling the environment – protect yourself
  - Contact, droplet
- Any suspicion of TB – mask them or yourself – N95 or equivalent
- Hand hygiene before and after contact with patient

## Waiting Room

- Screening still applicable
  - Fever and cough
    - Mask Please!
  - Rash
    - Mask Please!
- Need some space between patients
  - Move to an empty exam room
  - End of day visit

## Waiting Room

- Immunocompromised patients need some space also
- Masking for them, as a routine, is controversial
  - Many illnesses are from their own flora
  - But, being coughed on does not help!

## Patient with MRSA, VRE, etc.

- Some recommendations to practice Contact Precautions in Doctor's offices
  - Flag charts
- I am not so sure about the necessity
  - If not soiling the environment...
- Community Acquired MRSA

## Office Equipment

- Cleaning is very important for reusable equipment
- Single use equipment **MUST** be single use
- Need for disinfection or sterilization based on equipment use
- Disposable is best, if available



## Spaulding's Classification

CLASS	USE	REPROCESSING Minimum requirement
<b>Critical</b>	Sterile body site or vascular system	Cleaning followed by sterilization
<b>Semi-Critical</b>	Intact mucous membranes or non-intact skin	High Level disinfection
<b>Non-Critical</b>	Intact skin	Low or intermediate disinfection

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## Cleaning

- Removes dirt, body substances
- Dishwasher can be used for non-lumen instruments
- Soap and water
- Enzymatic cleaners
- Done as soon after use as possible

## Sterilization

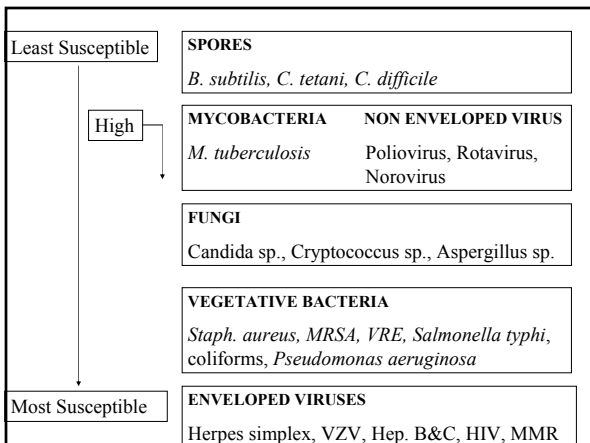
- Table top autoclaves
  - Must maintain
  - Must challenge with biological indicator
    - Daily? Weekly?
  - Tape only shows temperature was achieved
  - Wrapping important if not being used right away
  - Trays for procedures available

## Sterilization

- Chemicals (Cold Sterilization)
  - Issue with toxicity and ventilation
  - Storage of equipment after
  - Time (usually hours)
  - Rinse water should be sterile
  - New products being introduced all the time
  - <http://www.fda.gov/cdrh/ode/germlab.html>

## Disinfection

- **High Level**
  - Kills all microorganisms, with the exception of high numbers of bacterial spores



## Disinfection

- High
  - Kills all microorganisms, with the exception of high numbers of bacterial spores
- **Intermediate Level**
  - Kills *M. tuberculosis*, vegetative bacteria, most viruses and fungi, but not spores

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Least Susceptible	<b>SPORES</b> <i>B. subtilis, C. tetani, C. difficile</i>
Intermediate	<b>MYCOBACTERIA</b> <b>NON ENVELOPED VIRUS</b> <i>M. tuberculosis</i> Poliovirus, Rotavirus, Norovirus
	<b>FUNGI</b> Candida sp., Cryptococcus sp., Aspergillus sp.
Most Susceptible	<b>VEGETATIVE BACTERIA</b> <i>Staph. aureus, MRSA, VRE, Salmonella typhi,</i> <i>coliforms, Pseudomonas aeruginosa</i>
	<b>ENVELOPED VIRUSES</b> Herpes simplex, VZV, Hep. B&C, HIV, MMR

## Disinfection

- High
  - Kills all microorganisms, with the exception of high numbers of bacterial spores
- Intermediate
  - Kills *M. tuberculosis*, vegetative bacteria, most viruses and fungi, but not spores
- **Low Level**
  - Kills vegetative bacteria, enveloped viruses

Least Susceptible	<b>SPORES</b> <i>B. subtilis, C. tetani, C. difficile</i>
Low	<b>MYCOBACTERIA</b> <b>NON ENVELOPED VIRUS</b> <i>M. tuberculosis</i> Poliovirus, Rotavirus, Norovirus
	<b>FUNGI</b> Candida sp., Cryptococcus sp., Aspergillus sp.
Most Susceptible	<b>VEGETATIVE BACTERIA</b> <i>Staph. aureus, MRSA, VRE, Salmonella typhi,</i> <i>coliforms, Pseudomonas aeruginosa</i>
	<b>ENVELOPED VIRUSES</b> Herpes simplex, VZV, Hep. B&C, HIV, MMR

## Methodology

- **Sterilization is preferred over High Level Disinfection if tolerated or available**
  - Margin of safety

## Disinfection

- Usually done with liquid chemicals
  - Bleach, hydrogen peroxide, alcohol most common, glutaraldehyde has ventilation issues
  - Quats are mainly for cleaning, or low level disinfection

## Bleach

- Low to intermediate disinfection
  - Some evidence it will kill spores with high concentrations and long contact time
- Corrosive
- Inactivated by organic matter

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## Alcohol

- Low to intermediate disinfection
  - Thermometers, stethoscope
- Flammable
- Not effective against some non-enveloped viruses

## Hydrogen Peroxide

- 3% - low level
- 6% or Accelerated Hydrogen Peroxide
  - Intermediate to high level
  - Depends on contact time and concentration
- 7% range
  - Sterilant in 2 – 6 hours

## Quaternary Ammonium Compounds

- Low level
- Floors, surfaces

## Fixed Equipment

- Exam tables
  - Change covering between patients
  - Need for "wiping"
    - Routine
    - Between patients?
  - If soiled, written procedure in place
    - Clean, then disinfect

## Fixed Equipment

- Waiting Room
  - Clean at end of every day
  - Surfaces must be able to be wiped
  - Magazines should be disposed of if appear soiled

## Toys

- Hmmm, what to do??
- Clean after use?
  - Sanitize with freshly prepared bleach solution or spray with disinfectant that leaves no residue (hydrogen peroxide agents – check label)
- No cloth or plush toys!
- Play stations should be wiped down daily

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## Staff

- Immunizations up to date
  - MMR
  - Tetanus
  - Varicella
  - Hepatitis B (if possibility of blood exposure)
  - Annual influenza vaccination
  - Pneumovax for at risk

## Staff

- Need to have written exposure protocol
- Check with Infectious Disease expert
- Check with Medical Officer of Health
- <http://www.cpso.on.ca/Publications/publications.htm>

## Wrap Up

- Assume every patient has left you a present
- Assume every patient can make you or your next patient sick
- We cannot perform too much hand hygiene!!

## November 2005 Teleclasses

For more information, refer to  
[www.webbertraining.com/schedule.cfm](http://www.webbertraining.com/schedule.cfm)

### November 15 - UK Teleclass - ESBL Management

Presented by Dr. Graham Harvey  
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### December 1 - Preventing Ventilator Assisted Pneumonia

Presented by Dr. Robert Garcia  
Sponsored by Sage Products ([www.sageproducts.com](http://www.sageproducts.com))

### December 8 - Bloodborne Pathogen Control in the Community

Presented by Dr. Jun Wu

### December 15 - C. difficile: Environmental Survival

Presented by Dr. Michelle Alfa  
Sponsored by Virox Technologies ([www.virox.com](http://www.virox.com))

Questions? Contact Paul Webber [paul@webbertraining.com](mailto:paul@webbertraining.com)