

Infection Control in Community Care

September 25, 2008



South Eastern Ontario

*Giving Health
a Helping Hand*

Issues affecting Community Care



- Clients are being transferred to community care with health care acquired infections
- More complex treatments are being required
- Lack of adequate resources
- Increasing number and prevalence of antibiotic resistant organisms

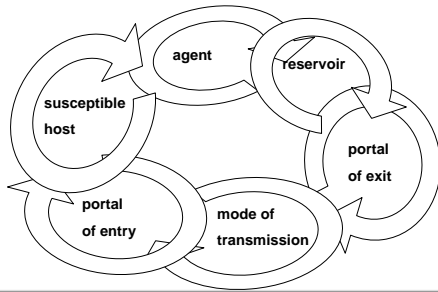


- In Canada, it has been estimated that 220,000 incidents of HAI occur each year, resulting in more than 8,000 deaths.
(Zoutman et al 2003)
- It is estimated that antibiotic resistant organisms (AROs) increase the annual direct and indirect costs to patients by an additional \$40 to \$52 million in Canada (Birnbaum, 2007)

Colonization vs. Infection

- **Colonization** = organism (bug/germ) present in or on the body but is not causing illness
- **Infection** = organism is present in or on the body and is causing illness (disease)

The Chain of Infection



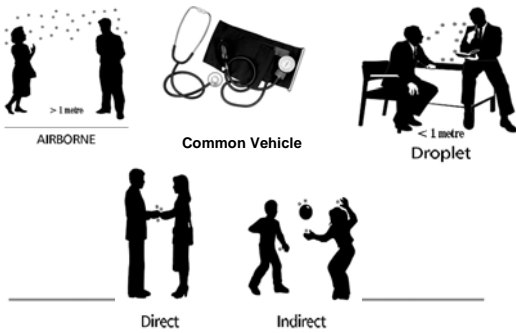
Our Clients



- Everyone has “bugs” on them, all the time
- Some are normal, some are potentially harmful
- There will always be someone around who can get sick from bugs
- We can get sick or infected by bugs if they find a “portal of entry”
 - Eyes, nose, mouth, breaks in the skin, etc.

Modes of Transmission

REGIONAL INFECTIOUS
CONTROL NETWORK
South Eastern Ontario Giving Health
a Helping Hand



Breaking the Chain

REGIONAL INFECTIOUS
CONTROL NETWORK
South Eastern Ontario Giving Health
a Helping Hand



- Interrupting 1 or more links breaks the chain of infection
- This can be accomplished by the use of routine practices

100
**MOST
COMMON
QUESTIONS**

REGIONAL INFECTIOUS
CONTROL NETWORK
South Eastern Ontario Giving Health
a Helping Hand

Question #1

"I have a question regarding a personal care worker who is now providing hands on care to a patient receiving palliative care who is colonized with MRSA but has no symptoms. The open wound he had is now closed and healed. What are the precautions this PSW should take?"

Answer

- Try to balance compassionate care with the risk of transmitting MRSA or any other bacteria between clients
- Patient is very likely colonized in other areas
- Routine practices if practiced consistently will prevent transmission of MRSA or any other infectious agent
- Contact with the environment may be just as risky as providing direct care so hand hygiene after contact with the environment is important

Routine Practices

- Minimum standards to use for **all** client contact
- Protect clients and staff
- If there is a chance of exposure to blood, body fluids, excretions or secretions, protect yourself
- Assume that **all** blood and body fluids are potentially infectious
- **If its' WET and not yours.....**

Routine Practices

PIDAC* 2007

- Hand hygiene before and after physical contact with a client or a contaminated environment
- Barrier precautions to prevent HCW contact with blood, body fluids, secretions, non-intact skin or mucous membranes
- Careful handling of soiled linen and waste
- Thorough cleaning & disinfecting of shared equipment between uses
- Risk assessment

* PIDAC= Provincial Infectious Diseases Advisory Committee

Source: http://www.health.gov.on.ca/english/providers/program/infectious/pidac/fact_sheet/fs_routine_010107.pdf

Hand Hygiene

Single most important way to control the spread of infection



- If hands are **not** visibly contaminated then the use of 60-90% alcohol based hand rub is preferred



- Washing with soap and water is required if there is visible soiling with dirt, blood, body fluids or other body substances



Reference: Best Practices for Hand Hygiene: PIDAC MAY 2008

Routine Practices: Glove Use



- Use for touching blood, body fluids, contaminated items, mucous membranes and non-intact skin
- Touch specific
- Avoid contaminating the environment/supplies
- **Perform hand hygiene after removal**
- An additional measure of protection:
NOT a substitute for hand hygiene



Routine Practices: Gowns



- Use to prevent soiling of clothes
- Not needed for all care
- Should be used during procedures and activities likely to generate splashes or sprays of blood, body fluids, secretions or excretions



Routine Practices: Masks & Eye Protection



- Used to protect the mucous membranes during procedures that may generate splashes or sprays of blood, body fluids, secretions or excretions
- When caring for coughing/febrile clients



Risk Assessment



- Screening and assessing client to identify any communicable diseases
 - Do you have a new/worse cough
 - Do you have a fever
 - New onset diarrhea
 - New undiagnosed rash
- Can be done during admission process or when booking appointments

Risk Reduction Strategies



- Proper assessment of risk
- Education of health care provider
- Hand hygiene and appropriate use of PPE
- Visit high risk clients at end of day (ie. Those with uncontained draining wounds, respiratory illness, open areas, known infections)

Question #2



*“ Alcohol can dry my hands , is there a non-alcohol based hand sanitizer acceptable for use in health care?”
Should I be buying antibacterial soap to use ?”*

Answer

- alcohol based hand rub is the preferred method of hand hygiene when hands are not visibly soiled (WHO, PIDAC, CDC)
 - Contain emollients that help reduce skin irritation
 - Take less time to use compared to washing with soap and water
- The effectiveness of non-alcohol based products for hand hygiene is not yet scientifically proven
- Antimicrobial soap may be used in critical care areas but is not recommended in other care areas

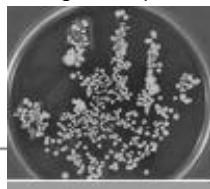
Source: Hand Hygiene Fact sheet for Health Care Settings: PIDAC 2008
http://www.health.gov.on.ca/english/providers/program/infectious/pidac/fact_sheet/fs_handwash_010107.pdf

Question #3

“ when we obtain written consent from a client they typically borrow our pen to use to sign the form. Are we putting ourselves or the next client at risk ? ”

Answer

- Pens and other equipment can certainly be a source of contamination. Bacteria and viruses on our hands can transfer to the pen and then on to the next person that handles it.
- Our hands are probably the most bug-laden part of our bodies
- Hand hygiene by both the client and the case manager will prevent potential transfer of organisms

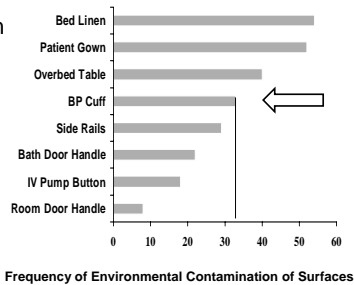


Question #4

“ what is the best way to clean equipment such as a stethoscope or blood pressure cuff ? How often should they be cleaned?”

What about our environment ?

bacteria on the skin or in the gastrointestinal tract of patients often contaminate items in the immediate vicinity of the patient



Life of Microorganisms in the Environment

Influenza	24-48 hours
Rotavirus	8 days to weeks
MRSA	days to weeks
VRE	weeks to months
HIV	until blood dries on surface
Hepatitis B	in dried blood at least 7 days
Hepatitis C	16 hours to 4 days
C-difficile	spores ????

Cleaning Equipment



Equipment must be cleaned after each client

– don't let 'organism' dictate cleaning practices

- Single **use** items must never be re-used
- Single patient items must be used for that client only



Spaulding Classification of Equipment



- **Semi-critical items:** devices that contact mucous membranes or non-intact skin- require intermediate or high level disinfection
 - Oral/rectal thermometers
 - Oral suction catheter
 - Humidifiers, nebulizers, nasal cannula
- **Non-critical items:** equipment that contacts intact skin- requires low level disinfection
 - Glucose monitors
 - Stethoscope, blood pressure cuffs, pulse oximeters
 - Tympanic/ axillary thermometers

Low Level Disinfectants



Chemical	Examples	Exposure time	Comments
Quaternary ammonium compounds (QUATS)	Benzalkonium Chloride	Use as directed on label	Fairly inexpensive Release volatile organic compounds
Hydrogen Peroxide (0.5%)	Hydrox ACCEL Per Diem	Use as directed on label for dilution	Safe and effective Available ready to use
Alcohol 60-90%		10 min	Difficult to keep surfaces damp
Sodium hypochlorite 1:100 dilution bleach	Household bleach	Until dry	Good disinfectant Toxic fumes



Question #5

“We have a client that is colonized with VRE. What special cleaning protocols should be followed in the home? Do we need special cleaning products and what about the laundry?”

Daily Cleaning & Disinfection

Scrubbing and wiping may be as important as any antimicrobial effect of the cleaning agent

– Guidelines for Environmental Infection Control in Health Care Settings: Centers for Disease Control, 2003

- Disinfecting is not as important as proper, effective cleaning



Cleaning

1. Physically removes foreign material such as dust, soil, secretions & microbes
2. Requires water, detergents & mechanical action.
3. Thorough cleaning is required before disinfection.

Note: a good, easily accessible disinfectant is household bleach
Use 1:10 dilution for disinfecting
½ cup bleach with 1 quart water **or**
¼ cup bleach with 2 ¼ cups water
mixed fresh daily



Cleaning procedures for common items

- Detergents are adequate for most surface cleaning
- Some surfaces may require low level disinfection depending on procedure being done

Surface/Object	Procedure
Horizontal surfaces	Regular cleaning with detergent Special procedures not necessary
Floors, carpets	Regular cleaning with detergents, clean when soiled Regular vacuuming, shampooing
Toilets and commodes	Regular cleaning Clean when soiled

Laundry

- Laundering with detergent and drying in a hot air drier will effectively kill microorganisms
- Soiled laundry should be handled with gloves and shaking should be avoided
- Avoid touching soiled laundry to their clothes and other surfaces such as floors and furniture
- Wash heavily soiled laundry separately

Question #6

“ what can I do to protect myself and my family?”

Keeping Staff & Clients Safe

- strict adherence to routine practices particularly hand hygiene
- Following established infection prevention and control practices at all times
- Immunization of health care workers
- Stay home when ill (FRI, diarrhea, rash etc)
- Education of health care provider and client
- Hand hygiene is the best way to prevent the spread of infection

Acknowledgements

- Janet Allen: SEOICN
- Jim Gauthier: Providence Care, Kingston
- Suzanne Rowland: Champlain ICN

References



Infection Prevention and Control Best Practices for Long Term and Community Care
Canadian committee on Antibiotic Resistance: June 2007

<http://www.ccar-ccra.com/english/pdfs/IPC-BestPractices-June2007.pdf>

Infection Control in Home Care and Hospice, 2nd Edition, 2006

APIC: Association for Professionals in Infection Control & Epidemiology

www.APIC.org

Provincial Infectious Diseases Advisory Committee (PIDAC)

http://www.health.gov.on.ca/english/providers/program/infectious/pidac/pidac_mn.html

Just Clean Your Hands

Ontario Ministry of Health and Long Term Care

<http://www.justcleanyourhands.ca/index.html>

Thank you



South Eastern Ontario

*Giving Health
a Helping Hand*
