

## **Infection Prevention and Control (IP & C) Wound Management Principles**

The following infection prevention and control measures should be followed when performing wound care in accordance with the WRHA Wound Care Guidelines. Routine Practices should be followed at all times to prevent transmission of infection. Refer to the WRHA Infection Prevention and Control Manual for more detailed information regarding Routine Practices.

### **Hand Hygiene:**

- Hands shall be washed with soap and water when hands are visibly soiled with blood, body fluids, secretions, excretions, and exudates from wounds.
- When hands are not visibly soiled, use an alcohol-based hand rub or wash with soap and water.
- Refer to the WRHA Infection Prevention and Control Manual for more detailed information regarding hand hygiene.

### **Personal Protective Equipment:**

- Gloves should be worn for contact with the wound or wound drainage.
- Caregivers should wear appropriate PPE (gowns/aprons, masks, eye protection/face protection) when splash or spray from wound drainage/irrigation is anticipated.
- N95 respirators must be worn when irrigating wounds infected with TB. Workers are required to be fit tested to ensure proper fit of N95 respirator. Contact Occupational and Environmental Safety & Health (OESH) for fit testing.

### **Waste Disposal:**

- All used dressings and disposable supplies should be contained in a leak proof bag and placed in the general waste.
- Irrigation solution and wound drainage may be disposed of by carefully pouring (to prevent splashing) down a drain.
- All used disposable sharp instruments (e.g. needles, lancets, scalpel blades, broken or easily broken glass items) should be discarded at the point of use, in a puncture-resistant/proof, leak-proof, container for disposal.

### **Aseptic Technique:**

- Practices designed to render and maintain objects and areas maximally free from microorganisms.
- The “sterile to sterile” concept must be adhered to.
- Involves using barriers such as gloves, gowns, masks and drapes to prevent transferring microorganisms from personnel or the environment to the patient/resident/client during the procedure being performed.

- Specific practices for wound care management include healthcare worker meticulous hand hygiene, preparation of patient/resident/client skin with antiseptic agent, single use devices and equipment or appropriately cleaned and reprocessed devices and equipment and maintaining a sterile field.
- Refer to facility/program specific procedures where aseptic technique is required.

### **Clean Technique:**

- Practices, which reduce the numbers of microorganisms and minimize the risk of transmission from personnel or the environment to the patient/resident/client.
- The “sterile to sterile” rule does not apply.
- Specific practices for wound care management include healthcare worker meticulous hand hygiene, single use devices and equipment or appropriately cleaned and reprocessed devices and equipment, barriers, using no-touch technique, sterile materials and supplies and maintaining a clean field.
- Refer to facility/program specific procedures where clean technique is required.

### **Wound Cleansing Agents/Equipment:**

- Before any wound-cleansing agent is used, it should be inspected for any evidence of damage to the bottle, leaking, foreign material, mold, or fungus.
- The wound-cleansing agent should be handled in a manner to avoid contamination of the fluid from the inside of the neck of the bottle, and the inside of the top of the cap.
- Irrigating solutions and equipment for use in personal care homes/long term care and acute care sites must be discarded after every use.
- Irrigating solution and equipment for use in the community, other than client’s home must be discarded after every use.
- Irrigating solution and irrigating syringe for use in client’s home in the community must be labeled with the healthcare worker’s name, date of issue and date of discard and then discarded within a week. Needle and syringe used for wound irrigation must be discarded after every use.
- Irrigating solution for use in Community Clinics must be labeled with the date and discarded everyday. Discard the needle and syringe used for irrigating after every use.
- If the irrigating solution is to be reused in the client’s home and in community clinics, and the container has a re-sealable cap, put the cap back on. It is not acceptable to use tape to seal or secure the container.
- Unused contents of single use non re-sealable containers of normal saline should be discarded following use.
- Solutions used for wound cleansing should never be “decanted” or “topped up” from bulk containers into smaller ones.

- Wound cleansing agents dispensed from a spray applicator must be used according to the manufacturer's directions and be dedicated to single patient/resident/client use. When cleansing a wound with a spray applicator product, the container must be held 16 to 21 cm (six to eight inches) from the wound bed to prevent contamination of the bottle and its contents.

### **Dressing, Pastes and Gels:**

- Opened dressings should be stored in a clean & separate area and be introduced only when required.
- Gels should be managed according to the WRHA Use of Ultrasound and Medical Gels Policy, No 90.00.07.
- Pastes should be single use for patient/resident/client.
- Outer packaging and containers of pastes must be handled with clean hands/clean gloves. Care must be taken not to contaminate the contents of the packages or containers.
- Manufacturer's written recommendations for shelf life and storage conditions should be followed.

### **Antibiotic Resistant Organisms:**

- If the individual is known to be colonized or infected with an ARO, e.g. Methicillin resistant *Staphylococcus aureus* (MRSA), Vancomycin resistant *Enterococcus* (VRE), it should be communicated in advance to personnel responsible for their care. This may include reporting to receiving health care facility in advance of the time of admission/transfer.
- Contact Precautions must be followed in the acute care hospitals for all patients/residents/clients who have a wound positive for an ARO.
- Routine Practices and if indicated, Contact Precautions, must be followed for all residents who have a wound positive for an ARO. The need for Contact Precautions will be determined in discussion with site Infection Prevention and Control.
- Routine Practices will be followed for all clients in the community who have a wound positive for an ARO.

### **References:**

1. APIC Text of Infection Control and Epidemiology. Copyright 2005. (pp. 20-2, 20-3). Aseptic Technique.
2. Association for Professionals in Infection Control (APIC) and Wound Ostomy Continence Nurses Society (2001). Position statement, clean vs. sterile: Management of chronic wounds. APIC, 20 (1), 19-21.
3. Canadian Standards Association (2001). *Handling of waste materials in health care facilities and veterinary facilities*. March, Z317, 10-01.

4. Crow, S. & Thompson, P. J. (2001). Infection Control Perspectives. In: D. Krasner, G. Rodeheaver, G. Sibbald (Eds), *A clinical source book for healthcare professionals*, (3<sup>rd</sup> ed), (pp. 357-367). HMP Communications, Wayne, PA.
5. Adapted from Capital Health (Edmonton) Regional Wound Care Guidelines (October 2000) and Vancouver Coastal Health Community
6. Rhinehart, E. & McGoldrick, M. (2006). Infection Control in Home Care and Hospice (2<sup>nd</sup> ed), (pp. 23,24). Jones and Bartlett Publishers, Official APIC Publication.

**Infection Prevention & Control (IP & C)  
 Communication Form**

<b>PART 1</b>				
Issue Submitted By	Brenda Dyck		Issue Number	2, 2006
Date	March 20, 2006		Date Directed To: WRHA Sr. Mgt	
<b>Subject:</b> Infection Prevention & Control Management of solution and equipment for wound irrigation.			Date Directed To: Med Advisory Cte	
			Date Directed To: Nursing Leadership	
<b>Indicate whether the issue is for:</b>			Date Directed To: CEOs	
Information	<input checked="" type="checkbox"/>		Date Directed To: WRHA IP&C Committee	May 18, 2006
Discussion	<input checked="" type="checkbox"/>		Date Directed To: WRHA Prog teams	
Decision	<input checked="" type="checkbox"/>		Date Directed To: Others	WRHA Regional Wound Care Strategic Planning Committee April 27, 2006
<b>PART 2</b>				
Review Date			Reviewed By:	
Action By			Distribution	

<p><b>Follow-up Requirements</b></p>
<p><b>Issue</b></p> <p>Use and storage of solution and equipment for wound irrigation</p>
<p><b>Discussion of Issue</b></p> <p>Solutions and equipment for wound irrigation are being reused in specific situations in care settings throughout the region. Solutions and equipment are being reused and stored for a week in the Personal Care Homes and the Community. Solutions and equipment are being discarded every day in the Acute/Long Term Care sites. WRHA Infection Prevention and Control Program wishes to have best evidence based practices for use and storage of solutions and equipment for wound irrigation for Personal Care Homes, Community and Acute Care sites within the region.</p>
<p><b>Options and Analysis</b></p>
<p><b>Recommendation</b></p> <p><b>For Personal Care Homes and Acute Care Sites:</b> Discard irrigating solution and equipment after every use. .</p> <p><b>For use in client's home in the Community:</b> Discard needle with every use. Discard irrigating solution and syringe every week. Store the syringe in the syringe package and tape shut. Irrigating solution and syringe package should be labeled with:</p> <ul style="list-style-type: none"> <li>• Healthcare worker's name</li> <li>• Date of issue</li> <li>• Date of discard</li> </ul> <p>Discard syringe if it becomes contaminated during irrigation.</p> <p><b>For use in the community, other than client's home:</b></p> <ul style="list-style-type: none"> <li>• Single use solution and equipment</li> </ul> <p><b>For use in Community Clinics:</b> Label the irrigating solution with the date and discard everyday. Discard syringe and angiocath with every use.</p>

**Infection Prevention & Control (IP & C)  
 Communication Form**

<b>PART 1</b>			
Issue Submitted By	Brenda Dyck	Issue Number	3, 2006
Date	May 18, 2006	Date Directed To: WRHA Sr. Mgt	
<b>Subject:</b> Sharing of personal items		Date Directed To: Med Advisory Cte	
		Date Directed To: Nursing Leadership	
<b>Indicate whether the issue is for:</b>		Date Directed To: CEOs	
Information		Date Directed To: WRHA IP&C Committee	May 18, 2006
Discussion	X	Date Directed To: WRHA Prog teams	
Decision	X	Date Directed To: Others	
<b>PART 2</b>			
Review Date		Reviewed By:	
Action By		Distribution	

### **Follow-up Requirements**

#### **Issue**

Sharing of personal items including but not limited to shampoo, lotions, soaps, mouthwash, deodorant, nail care items is being done in some sites across the region. Sharing of these items can transmit infections between patients, residents and clients.

#### **Discussion of Issue**

Public Health Agency of Canada (Health Canada) Routine Practices recommends personal items should not be shared.

#### **Options and Analysis**

#### **Recommendation**

1. Personal items cannot be shared between patients, residents and clients
2. Single use personal items should be used.
3. If large quantity bottles/containers of personal hygiene solutions/products are used they must be decanted into a single use disposable container for each patient, resident or client.

#### **References:**

1. Public Health Agency of Canada. Routine Practices & Additional Precautions for Preventing the Transmission of Infection in Health Care. Canada Communicable Disease Report. Volume 25S4. July 1999.



**Infection Prevention & Control (IP & C)  
Communication Form**

<b>PART 1</b>				
Issue Submitted By	Brenda Dyck	Issue Number	2, 2005	
Date	March 24, 2005	Date Directed To: WRHA Sr. Mgt		
<b>Subject:</b> The replacement of 4% Chlorhexidine to 2% Chlorhexidine for hand antisepsis and cleansing.		Date Directed To: Med Advisory Cte		
		Date Directed To: Nursing Leadership	April 6, 2005	
<b>Indicate whether the issue is for:</b>		Date Directed To: CEOs		
Information	<input checked="" type="checkbox"/>	Date Directed To: WRHA IP&C Committee	March 24, 2005	
Discussion	<input checked="" type="checkbox"/>		Date Directed To: WRHA Prog teams	
Decision	<input type="checkbox"/>		Date Directed To: Others	
<b>PART 2</b>				
Review Date	June 1, 2005	Reviewed By:	Brenda Dyck	
Action By		Distribution		
<b>Follow-up Requirements</b>				

### **Issue**

The WRHA Logistic Hand Cleanser Working Group requires a recommendation from WRHA IP & C regarding whether it would be acceptable to use 2% chlorhexidine instead of 4% chlorhexidine for hand antisepsis and cleansing in all of the programs and sites within the WRHA.

### **Discussion of Issue**

The WRHA Hand Cleanser Working Group is currently reviewing a new contract for hand cleansing products throughout the WRHA. There are variances in products used within and between sites as well many different types of dispensers. IP & C wishes to have standardization and a family of products chosen from 1 vendor. 2% chlorhexidine and 4% chlorhexidine are the common antimicrobial hand cleansers used throughout the WRHA for hand antisepsis and cleansing. In consideration of the new contract WRHA IP & C was asked to review whether there was any difference between 2% and 4% chlorhexidine for hand antisepsis or cleansing.

### **Options and Analysis**

Brenda Dyck, Program Director, IP & C contacted Dr. Elaine Larsen, who is recognized world wide as an expert in IP & C, specifically hand hygiene. Dr. Larsen has published many scientific articles regarding hand hygiene. Dr. Larsen communicated there was minimal difference in antimicrobial activity between 2% versus 4% chlorhexidine. Literature regarding differences between the 2 concentrations were also reviewed by the IP& C representatives on the hand cleanser working group and concluded there was minimal difference between 2% and 4% chlorhexidine for hand antisepsis and cleansing.

4% chlorhexidine skin cleanser is currently being used for specific patient preps prior to invasive procedures. At this point in time 4% chlorhexidine will still be the recommended prep for patients prior to invasive procedures. Chlorhexidine has a cumulative effect when applied to the skin. In hand cleansing this effect remains and is sustained, especially when hand hygiene is repeated. 2% chlorhexidine can be used for hand antisepsis and cleansing because of the cumulative effect.

4% chlorhexidine will still be maintained for patient prep prior to invasive procedures.

### **Recommendation**

WRHA IP & C recommends:

1. Use 2% chlorhexidine cleanser within the WRHA for hand antisepsis and hand cleansing when an antimicrobial hand soap is indicated.

**Communication Form**

<b>PART 1</b>			
Issue Submitted By	Brenda Dyck	Issue Number	1, 2005
Date	January 20, 2005	Date Directed To: WRHA Sr. Mgt	
<b>Subject:</b> Reuse of electrical razors for personal hygiene in patient care areas within hospitals.  This issue was raised by infection control practitioners as a concern at the hospitals. This communication details the actions to date and need for future review.		Date Directed To: Med Advisory Cte	
		Date Directed To: Nursing Leadership	April 6, 2005
<b>Indicate whether the issue is for:</b>		Date Directed To: CEOs	
Information	X		Date Directed To: WRHA IP&C Committee.
Discussion	X		Date Directed To: WRHA Prog teams
Decision			Date Directed To: Others
<b>PART 2</b>			
Review Date		Reviewed By	
Action By		Distribution	
<b>Follow-up Requirements</b>			

**Issue**

Reuse of electrical razors for personal hygiene occurs in some patient care areas in hospitals in WRHA.

**Discussion of Issue**

Razor blades can accidentally cut a patient and become contaminated with blood. This can then become a device that can transmit a blood borne infection like Hepatitis B or HIV infection.

There is also a concern regarding build up of epithelial cells that could contaminate a cut and transmit infection.

Routine Practices indicates there should not be sharing of personal items between patients.

**Options and Analysis**

1. Use of electrical razors with disposable heads. These razors would have to be cleaned well between patient use.
2. Each patient provides their own razor, which is not shared between other patients.
3. Disposable single patient use razors are provided to patients that do not have their own razors.
4. Razors are to be labeled with patient name.

**Recommendation**

The following recommendation was made at the WRHA Infection Prevention and Control Committee on January 20, 2005.

1. Razors are not to be shared between patients.
2. Each patient is to have their own razor labeled with patient name.
3. If a patient is unable to provide their own razor they are to be supplied with a disposable single patient use razor or the use of electrical razors with disposable head.

## Infection Prevention & Control (IP & C) Communication Form

<b>PART 1</b>			
Issue Submitted By	Brenda Dyck	Issue Number	1, 2004
Date	December 2, 2004	Date Directed To: WRHA Sr. Mgt	January 3, 2005
<b>Subject:</b> String cords and call bells in patient care areas within hospitals.  This issue was raised by infection control practitioners and discussed with facility managers. This communication details the actions to date and need for future review.		Date Directed To: Med Advisory Cte	January 2005
		Date Directed To: Nursing Leadership	April 6, 2005
<b>Indicate whether the issue is for:</b>		Date Directed To: CEOs	January 2005
Information		Date Directed To: WRHA IP&C Committee.	December 2, 2004 September 23, 2004
Discussion	X	Date Directed To: WRHA Prog teams	Facilities Managers Group September 30, 2004
Decision		Date Directed To: Others	
<b>PART 2</b>			
Review Date	April 1, 2005	Reviewed By	WRHA IP&C Program
<b>Discussion</b> 1.) Ensure call bells are being cleaned routinely and on patient transfer and discharge. 2.) Standardized guideline for replacement of call bells. 3.) Plan for replacement of string cords is developed.			
Action By		Distribution	
<b>Follow-up Requirements</b>			

**Issue**

Push button call bells have been linked to transmission of infection and outbreaks. String cords become visually contaminated in a hospital environment and therefore are a major Infection Prevention and Control concern because they cannot be cleaned between patients.

**Discussion of Issue**

Microorganisms and contaminated material migrate under the button and contaminate the inside of push button call bells. An outbreak of VRE in Toronto was linked to push button call bells. The call bells were taken apart and there was evidence of heavily contaminated fecal material inside. The fecal material inside was epidemiological linked to the same strain of VRE that was the cause of the outbreak. The majority of call bells in hospitals in WRHA are the push button type.

String cords cannot be cleaned between patients. Improper cleaning of the physical environment has been related to transmission of many types of pathogenic organisms, i.e. *C. difficile*, VRE. The majority of string cords in hospitals within WRHA are not cleanable and are not changed between patients.

**Options and Analysis**

Push button call bells will be more difficult to implement as they are usually built into the nurse call system and cannot be readily changed. The changing of the calls bells would require significant funding for implementation. As this will be a more long term goal, it is important to ensure all call bells are routinely cleaned as well as when patient is discharged or transferred.

Some of the hospitals within the WRHA have started replacing the string cords with a cleanable type while others still maintain these string cords on their patient care units. In discussion with Gord Trann, Regional Director, Facilities Management the string cords must be constructed of a material that does not conduct electricity. The Facilities Managers Group wish to strive for standardization of the string cords taking into account there maybe differences at some facilities as not all systems are compatible. The speed at which the cords will be changed is also an issue. Funding must be identified at each of the facilities and secured to purchase and change all of these cords. Funding may be an issue at some of the facilities and may cause delay in implementation. An interim measure would be to change string cords when visibly soiled or on patient discharge or transfer. This would be only an option for a short period of time until the string cords can be changed to a cleanable type.

**Recommendation**

At the September 23, 2004 WRHA Infection Prevention and Control Committee the Infection Prevention and Control concerns regarding call bells and string cords were discussed. The following are the recommendations for call bells and string cords:

1. Call bells should be replaced with a sealed, flat surface type where necessary, i.e. during renovations, when in need of repair. The changing of call bells will require long term implementation. It is therefore important to ensure call bells be cleaned as part of routine cleaning of patient rooms as well as upon patient transfer or discharge.
2. Replace the string cords with cords that can be easily cleaned. i.e. coated wire

Brenda Dyck notified Gord Trann on of the WRHA Infection Prevention and Control Committee recommendation. The recommendations were presented at the regional Facility Management Group. The Facility Management Group acknowledges string cords and call bells are a concern. There is work in progress by the Facility Management Group to ensure there is standardization of the call bells and string cords across WRHA. The decision at the facility management group was for the Facility Management individuals to go back to their hospitals and address funding and implementation to change the string cords.

Call bells and string cords were again discussed at the December 2, 2004 WRHA IP&C Committee. The IP&C members will also go back to their hospitals to address the issue of call bells and string cords.

Facility Management and Infection Prevention and Control under the direction and guidance of Gord Trann and Brenda Dyck will develop a policy and guideline for string cords and for upgrades and replacements of suitable call bells when they need to be replaced.