



## 1. Hand Hygiene Quick Reference Chart

**Hand washing/hand hygiene reduces the number of microorganisms on the hands and is the most important practice to prevent the spread of infection.**

### **WHEN**

#### Before:

- Direct hands-on care with a client
- Performing invasive procedures
- Handling dressings or touching open wounds
- Preparing and administering medications
- Preparing, handling, serving, or eating food
- Feeding a client

#### After:

- Contact with blood, body fluids, non-intact skin, and/or mucous membranes
- Contact with items known, or considered to be contaminated
- Removal of gloves
- Personal use of toilet or wiping nose

#### Between:

- Procedures on the same client where soiling of hands is likely, to avoid cross-contamination of body sites

### **HAND WASHING/HAND HYGIENE AGENTS**

#### Alcohol-Based Hand rub:

- Must contain a minimum of 60% alcohol
- Use in all clinical situations, except when hands are visibly soiled
- Use as an alternate when plain or antimicrobial soap is indicated, except when hands are visibly soiled

#### Plain Soap:

- For routine hand washing

#### **Antimicrobial Soap:**

- Before contact with invasive devices
- Before performing any invasive procedures
- Before contact with immunosuppressed clients
- Before/after contact with clients on infection control precautions/isolation



## 2. Hand Hygiene Procedure

### Using an Alcohol-Based Hand Rub



Apply 2 - 3 mL of product to the palm of one hand.



Rub hands together covering all surfaces including fingernails, web spaces, thumbs and palms.



The product generally dries within 15 - 20 seconds.

Ensure hands are completely dry before performing another task.

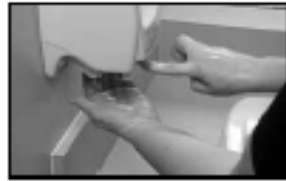


### 3. Hand Hygiene Procedure

#### Using Plain Soap or Antimicrobial Soap



Wet hands under warm running water.



Apply soap and distribute over hands.



Rub hands together vigorously for 10 - 15 seconds to create a good lather.



Using friction, cover all hand surfaces including fingernails, web spaces, thumbs and palms.

Rinse under warm running water.



Dry hands gently and thoroughly with a disposable towel.



Turn off faucet using a clean disposable towel.



## **4. Donning and Removing Personal Protective Equipment (PPE)**

### **Donning Personal Protective Equipment (PPE)**

1. Perform Hand Hygiene
2. Put on long sleeve gown with opening of gown at back
3. Tie neck and waist ties
4. Apply mask/respirator, seal check (if N95 respirator) to ensure correct fit, reapply glasses
5. Apply protective eyewear if appropriate
6. Apply gloves, pulling gloves up over cuffs of gown

### **Removing Personal Protective Equipment (PPE)**

#### **Prior to Exiting Area/Client Room**

1. Remove gloves using “glove-to-glove, skin-to-skin” technique
2. Discard
3. Perform Hand Hygiene
4. Untie neck ties first, then waist ties on the gown
5. Place fingers of one hand under the opposite cuff and pull cuff over hand
6. Using the gown-covered hand, pull the gown down over the other hand
7. Pull the gown down off the arms, being careful that the hands do not touch the outside of the gown
8. Hold the gown away from clothing and roll it up with the contaminated side inside in a way that minimizes air disturbance
9. Dispose into garbage
10. Perform Hand Hygiene
11. Use paper towel to open door

#### **Immediately After Exiting Area/Client Room**

1. Remove eye protection/face shield if worn
2. Remove mask/respirator according to manufacturer’s instructions
3. Take care to prevent self-contamination
4. Discard into garbage
5. Perform Hand Hygiene



## 5. Air Changes Per Hour and Time in Minutes Required for Removal Efficiencies of 90%, 99%, or 99.9% of Airborne Contaminants\*

MINUTES REQUIRED FOR A REMOVAL EFFICIENCY OF:			
Air Changes per Hour	90%	99%	99.9%
1	138	276	414
2	69	138	207
3	46	92	138
4	35	69	104
5	28	55	83
6	23	46	69
7	20	39	59
8	17	35	52
9	15	31	46
10	14	28	41
11	13	25	38
12	12	23	35
13	11	21	32
14	10	20	30
15	9	18	28
16	9	17	26
17	8	16	24
18	8	15	23
19	7	15	22
20	7	14	21

This table is prepared according to the formula  $t = (in C2/C1)/(Q/V) = 60$ , which is an adaptation of the formula for the rate of purging airborne contaminants (Mutchler, 1973) with  $t_1 = 0$  and  $C2/C1 = 1 - (\text{removal efficiency}/100)$ .

Source: Adapted from CDC (1994). *Guidelines for preventing the transmission of Mycobacterium tuberculosis in health care facilities*. MMWR 1994; 43 (RR- 13): 1-32.



## 6.1 Infection Prevention & Control Signs – Price List

<b>Infection Prevention &amp; Control Signs</b>		Effective February 4, 2009	
<b>Name of Sign</b>	<b>Form number</b>	<b>Colour Signs</b>	
		<b>8.5 X 11</b>	<b>11 X17</b>
<b>Routine Practices Signs</b>		<b>Laminated</b>	<b>Laminated</b>
1. Donning Personal Protective Equipment (PPE)	W-00160	\$2.50	\$4.50
2. Hand Hygiene – Using an Alcohol-Based Hand Rub	W-00161	\$2.50	\$4.50
3. Hand Hygiene – Using Plain Soap for Antimicrobial Soap	W-00162	\$2.50	\$4.50
4. Removing Personal Protective Equipment (PPE) – Prior to Exiting Patient Room	W-00163	\$2.50	\$4.50
5. Removal of Personal Protective Equipment (PPE) - Immediately After Exiting Patient	W-00164	\$2.50	\$4.50
6. Hand Hygiene Quick Reference Chart (Black & White)	W-00165	\$2.50	\$4.50
<b>Cover Your Cough Signs</b>			
1. Cover Your Cough #1 – English (version from Minnesota Department of Health)	W-00166	\$2.50	\$4.50
2. Cover Your Cough #1 – Bilingual (version from Minnesota Department of Health)	W-00167	\$2.50	\$4.50
3. Cover Your Cough #2 – English (version developed by WRHA)	W-00167	\$2.50	\$4.50
4. Cover Your Cough #2 – Bilingual (version developed by WRHA)	W-00168	\$2.50	\$4.50
Please contact the Print Department for pricing on signs larger than 11"x17"			
		Quantity	
1. Cover Your Cough Pamphlet - Bilingual	W-00158	20	\$62
		50	\$106
		100	\$206
		500	\$257
		<b>Non-Laminated</b>	<b>Laminated</b>
<b>Additional Precautions Signs -</b>		<b>8.5 X 11</b>	<b>8.5 X 11</b>
1. Airborne Precautions – English	W-00169	\$1.50	\$2.50
2. Airborne Precautions – Bilingual	W-00170	\$1.50	\$2.50
3. Airborne/Contact Precautions – English	W-00171	\$1.50	\$2.50
4. Airborne/Contact Precautions – Bilingual	W-00172	\$1.50	\$2.50
5. Contact Precautions – English	W-00173	\$1.50	\$2.50
6. Contact Precautions – Bilingual	W-00174	\$1.50	\$2.50
7. Droplet Precautions – English	W-00175	\$1.50	\$2.50
8. Droplet Precautions – Bilingual	W-00176	\$1.50	\$2.50
9. Droplet/Contact Precautions – English	W-00177	\$1.50	\$2.50
10. Droplet/Contact Precautions – Bilingual	W-00178	\$1.50	\$2.50
		<b>Non-Laminated</b>	<b>Laminated</b>
<b>Hand Hygiene Signs</b>		<b>4.25 x 5.5</b>	<b>4.25 x 5.5</b>
1. Wash Your Hands Sign - English (4.25" x 5.5")	W-00202	\$0.60	\$1.50
2. Please Use the Hand Rub Provided sign - English (4.25" x 5.5")	W-00203	\$0.60	\$1.50
3. Wash Your Hands Sign - Bilingual (4.25" x 5.5")	W-00205	\$0.60	\$1.50
4. Please Use the Hand Rub Provided sign - Bilingual (4.25" x 5.5")	W-00206	\$0.60	\$1.50
		<b>Non-Laminated</b>	<b>Laminated</b>
		<b>8.5 X 11</b>	<b>8.5 X 11</b>
5. Please Use the Hand Rub Provided poster - English (8.5" x 11")	W-00204	\$1.50	\$2.50
6. Please Use the Hand Rub Provided poster - Bilingual (8.5" x 11")	W-00207	\$1.50	\$2.50



## 6.2 Infection Prevention & Control Signs – Ordering Process

The following process can be followed to order the Infection Prevention & Control signs:

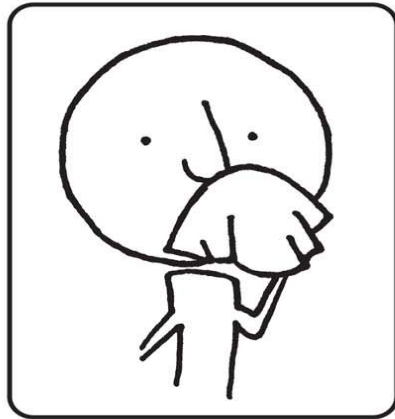
1. Orders can be sent to:  
HSC Printing Services  
MH210A – 59 Pearl Street  
Winnipeg, MB R3E 3L7  
Fax: (204) 787-2086  
E-mail: [printserv@hsc.mb.ca](mailto:printserv@hsc.mb.ca)
2. Cost of signs – please see the price list.
3. Please specify on the purchase order which signs you wish, the Print Shop order number and the quantity required. For non-HSC customers a PO number is required. Print Shop Work Orders can be found on the WRHA intranet site under the Finance section. Please call Rod Sherwin @ 787-3555 if you have questions.
4. There is no minimum order.

If you require specific information on how to order these signs, please contact Infection Prevention & Control at 833-1750.

## 7.1 Cover Your Cough (Pamphlet) – Bilingual – (Page 1)

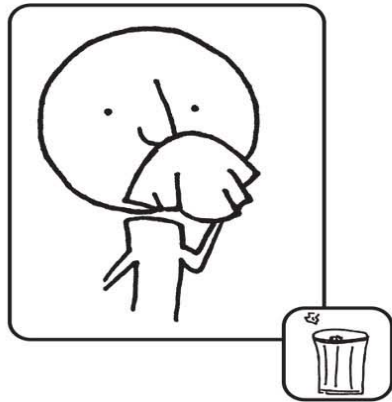
Stop the spread of germs that make you and others sick!

# Cover your Cough



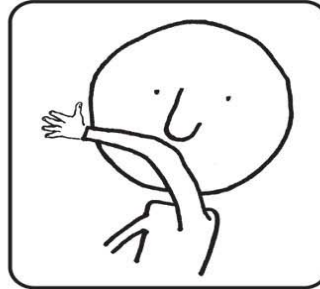
### Why should I cover my cough?

- Serious respiratory illnesses like influenza, respiratory syncytial virus (RSV), whooping cough and Severe Acute Respiratory Syndrome (SARS) are spread by:
  - Coughing or sneezing
  - Unclean hands
- These illnesses spread easily in crowded places where people are in close contact.



### How do I stop the spread of germs if I'm sick?

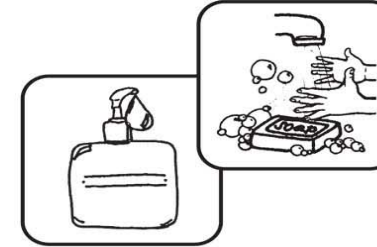
- Cover your nose and mouth with a tissue every time you cough or sneeze. Throw the used tissue in a waste basket.
- If you don't have a tissue, sneeze or cough into your sleeve.



- After coughing or sneezing, always clean your hands with soap & water or an alcohol-based hand cleaner.
- Stay home when you are sick
- Do not share eating utensils, drinking glasses, towels or other personal items.

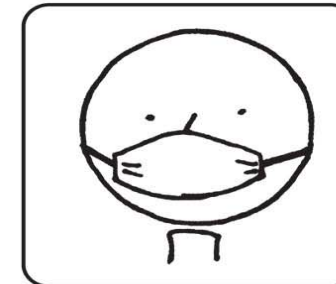
### How can I stay healthy?

- Clean your hands often with soap and water or an alcohol-based hand cleaner.
- Avoid touching your eyes, nose or mouth.
- Avoid close contact with people who are sick, if possible.
- Get vaccinated! Influenza (flu) and pneumococcal (pneumonia) vaccines can prevent some serious respiratory illnesses.



### When you are at a clinic or hospital

- Cover your cough or sneeze with a tissue and dispose of the used tissue in the waste basket.
- Clean your hands with soap and water or an alcohol-based hand cleaner.
- You may also be asked to wear a mask to protect others.
- Don't worry if you see staff and other people wearing masks. They are preventing the spread of germs.

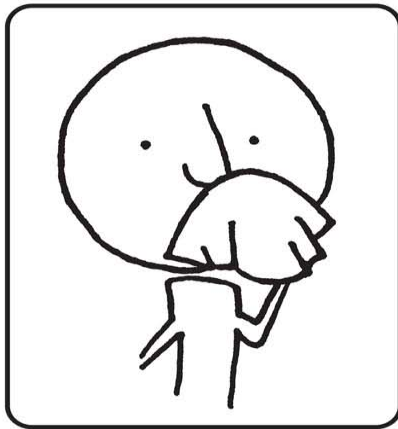




## 7.1 Cover Your Cough (Pamphlet) – Bilingual – (Page 2)

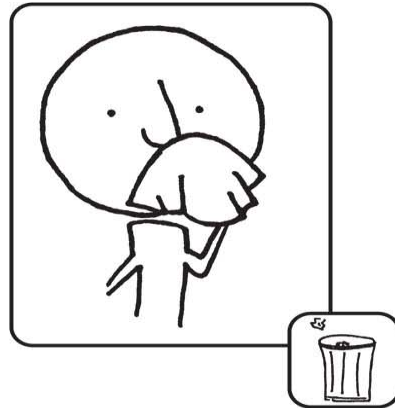
Freinez la propagation des microbes qui peuvent vous rendre, vous et votre entourage, malade!

# Couvrez-vous!



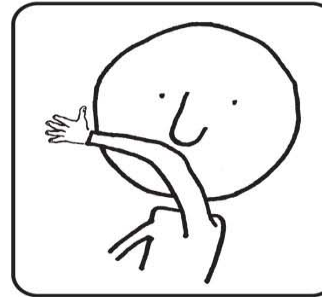
### Pourquoi devrai-je me couvrir?

- De sérieuses maladies respiratoires telles que la grippe, le virus respiratoire syncytial (RS), la coqueluche et le syndrome respiratoire aigu sévère (SRAS) sont transmises par :
  - la toux et l'éternuement
  - les mains sales
- Ces maladies se propagent facilement dans des lieux bondés où les personnes sont en contact étroit.



### Comment est-ce que je freine la propagation des microbes si je suis malade?

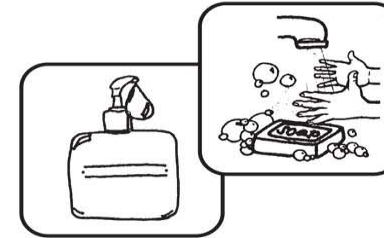
- Couvrez-vous le nez et la bouche avec un mouchoir chaque fois que vous toussiez ou éternuez. Mettez le mouchoir à la poubelle.
- Si vous n'avez pas de mouchoir, éternuez ou toussiez dans votre manche.



- Après avoir toussé ou éternué, lavez-vous toujours les mains avec du savon et de l'eau ou utilisez un désinfectant à base d'alcool pour les mains.
- Restez à la maison lorsque vous êtes malade.
- Ne partagez pas les ustensiles, les verres, les serviettes ou d'autres articles personnels.

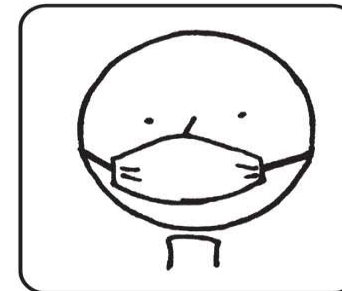
### Comment est-ce que je peux rester en bonne santé?

- Lavez-vous souvent les mains avec du savon et de l'eau ou utilisez un désinfectant à base d'alcool pour les mains.
- Évitez de vous toucher les yeux, le nez ou la bouche.
- Évitez le contact étroit avec les personnes malades, si possible.
- Faites-vous vacciner! Les vaccins contre la grippe et la pneumonie peuvent prévenir certaines maladies respiratoires graves.



### Lorsque vous êtes dans une clinique ou à l'hôpital :

- Couvrez-vous ou éternuez dans un mouchoir et mettez-le à la poubelle.
- Lavez-vous les mains avec du savon et de l'eau ou utilisez un désinfectant à base d'alcool pour les mains.
- Il est également possible qu'on vous demande de porter un masque pour protéger les autres.
- Ne vous en faites pas si vous voyez des membres du personnel et d'autres personnes portant un masque. Ils empêchent la propagation de microbes.






## 7.2 Cover Your Cough Poster #1 - Bilingual

**Stop the spread of germs that make you and others sick!**


**Freinez la propagation des microbes qui peuvent vous rendre, vous et votre entourage, malade!**

# Cover your Cough Couvrez-vous VOUS!



Cover your mouth and nose with a tissue when you cough or sneeze

*Couvrez-vous la bouche et le nez avec un mouchoir lorsque vous toussiez ou éternuez*




or / ou

cough or sneeze into your upper sleeve, not your hands.

*éternuez ou toussiez dans le haut de votre manche et non dans la main.*

Put your used tissue in the waste basket.

*Mettez le mouchoir à la poubelle.*



**Clean your hands after coughing or sneezing.**

**Lavez-vous les mains après avoir toussé ou éternué.**



Wash with soap and water

*Lavez-vous les mains avec de l'eau et du savon*



or clean with alcohol-based hand cleaner.

*ou utilisez un désinfectant à base d'alcool pour les mains.*



You may be asked to put on a surgical mask to protect others.

*On vous demandera peut-être de porter un masque chirurgical pour protéger les autres.*





### 7.3 Cover Your Cough Poster #2 - Bilingual



## Cover your Cough

If you have a fever, difficulty breathing, and a new or worsening cough:

- Clean your hands
- Put a mask on, covering nose and mouth
- Report to the desk



## Couvrez-vous!

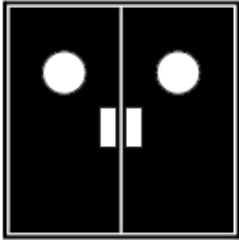
Si vous avez de la fièvre, de la difficulté à respirer et une toux récente ou qui s'aggrave :

- Lavez-vous les mains
- Couvrez-vous le nez et la bouche à l'aide d'un masque
- Présentez-vous au comptoir de réception





## 8.1 Airborne Precautions



### CLIENT PLACEMENT

- Single room
- Door closed



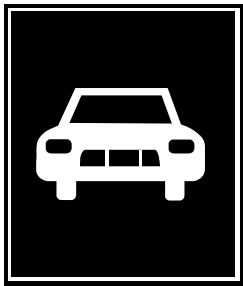
### HAND HYGIENE

- Follow Routine Practices
- Before entering the room
- Before leaving the room
- After removing N95 respirator



### RESPIRATOR

- N95 respirator upon entering the room
- Remove after leaving the room

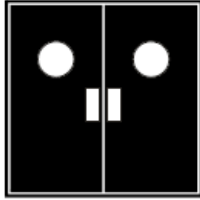


### TRANSPORT

- Transport for medically essential purposes only
- Client wears surgical/procedure mask
- Notify receiving facility in advance



## 8.2 Airborne/Contact Precautions Sign



### CLIENT PLACEMENT

- Single room
- Door closed



### HAND HYGIENE

- Follow Routine Practices
- Before entering the room
- Before leaving the room
- After removing N95 respirator



### GLOVES

- Before entering room
- Remove before leaving room
- Between procedures if contamination has occurred



### GOWN

- For direct contact with client or surfaces and objects room
- Remove before leaving room



### RESPIRATOR

- N95 respirator upon entering the room
- Remove after leaving the room



### EQUIPMENT

- Dedicate equipment or clean/disinfect between use



### TRANSPORT

- Transport for medically essential purposes only
- Client wears surgical/procedure mask
- Notify receiving facility in advance



## 8.3 Contact Precautions



### CLIENT PLACEMENT

- Single room preferred
- Door may remain open
- If shared room: maintain a distance of at least 1 metre (3 feet) between clients



### HAND HYGIENE

- Follow Routine Practices
- Before entering the room or client space
- Before leaving the room or client space



### GLOVES

- Before entering room or client space
- Remove before leaving room or client space
- Between procedures if contamination has occurred



### GOWN

- For direct contact with client or surfaces and objects in room
- Remove before leaving client space



### EQUIPMENT

- Dedicate equipment or clean/disinfect between use



### TRANSPORT

- Transport for medically essential purposes only
- Notify receiving facility in advance



## 8.4 Droplet Precautions



### CLIENT PLACEMENT

- Single room preferred
- Door may remain open
- If shared room: maintain a distance of at least 1 metre (3 feet) between clients



### HAND HYGIENE

- Follow Routine Practices
- Before entering the room or client space
- Before leaving the room or client space



### MASK

- Surgical/procedure mask within 1 metre (3 feet) of client
- Remove after leaving room or client space



### EYE PROTECTION

- Goggles or face shield worn within 1 metre (3 feet) or client
- Remove after leaving room or client space

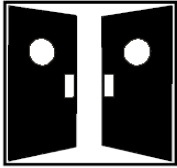


### TRANSPORT

- Transport for medically essential purposes only
- Client wears surgical/procedure mask
- Notify receiving facility in advance



## 8.5 Droplet/Contact Precautions



### CLIENT PLACEMENT

- Single room preferred
- Door may remain open
- If shared room: maintain a distance of at least 1 metre (3 feet) between clients



### HAND HYGIENE

- Follow Routine Practices
- Before entering the room or client space
- Before leaving the room or client space



### GLOVES

- Before entering room or client space
- Remove before leaving room or client space
- Between procedures if contamination has occurred



### GOWN

- For direct contact with client or surfaces and objects in room
- Remove before leaving client space



### MASK

- Surgical/procedure mask within 1 metre (3 feet) of client
- Remove after leaving room or client space



### EYE PROTECTION

- Goggles or face shield worn within 1 metre (3 feet) of client
- Remove after leaving room or client space



### EQUIPMENT

- Dedicate equipment or clean/disinfect between use



### TRANSPORT

- Transport for medically essential purposes only
- Client wears surgical/procedure mask
- Notify receiving facility in advance





## 9.1. WRHA Extended Spectrum Beta Lactamase (ESBL) Producing Bacteria Fact Sheet for Healthcare Workers in the Community

### **What are Extended Spectrum Beta Lactamases (ESBLs)?**

Extended spectrum beta lactamases (ESBLs) are enzymes produced by some gram negative bacteria that can inactivate a wide range of antibiotics particularly penicillins and cephalosporins. *E. coli* and *Klebsiella* are the organisms most frequently associated with ESBLs. The gastrointestinal tract is the most common site of colonization and less frequently the respiratory tract. The sites most frequently infected with ESBLs are the urinary tract and wounds. ESBLs have been present in Europe and the USA since 1983. These bacteria have only recently been detected in Canada in low, but increasing numbers.

### **What to look for (signs and symptoms of ESBLs)?**

Most people with ESBLs have no symptoms (asymptomatic). For the few people who develop symptoms of infection, antibiotics should be used. Infections caused by ESBLs present in the same way as non-ESBL producing organisms. These infections can be serious; therefore, knowing a person has ESBL is important to ensure the most appropriate treatments are prescribed.

### **How are ESBLs transmitted (spread)?**

Lack of hand hygiene, especially after using the washroom, can spread these bacteria. The spread of ESBLs in a facility occurs most commonly through direct contact with someone who has ESBL, contaminated environment, or on the hands of healthcare providers. Careful cleaning of frequently touched surfaces is important to reduce the spread of these organisms in a facility.

### **How is ESBL detected?**

The laboratory can identify ESBLs in a clinical specimen obtained from an infected client. Screening cultures are not routinely required. The need for screening cultures will be determined by Infection Prevention and Control. Laboratories perform tests to determine which antibiotics will be effective (sensitive) or not effective (resistant) for treatment.

### **Who is at risk?**

Patients in hospital are at higher risk for acquiring an ESBL. Some risk factors are:

- Prolonged stay in a healthcare facility where ESBL cases have been reported.
- Treatment with antibiotics, especially cephalosporins.
- Recent surgery.
- Instrumentation (IV and urinary catheters).
- Open wounds.
- Prolonged hospitalization and/or admission to a high-risk unit.



Clients in the home are not at risk of acquiring an ESBL if Routine Practices are followed.

**Healthcare worker/staff:** Healthcare workers are not usually at risk for ESBL colonization/infection, therefore not routinely screened. The chances of colonization/infection with ESBL do not increase even if you have been in contact with an individual with ESBL, e.g. at work. Healthcare workers/staff including pregnant healthcare workers are at minimal risk of acquiring ESBL colonization/infection provided they adhere to Routine Practices and Additional Precautions for the specific situation. If you are immunocompromised the risk is also very small. Please contact Occupational & Environmental Safety & Health if you have concerns about working with patients/clients who are colonized/infected with an ESBL.

#### **How is ESBL treated?**

Treatment is only necessary for people with symptomatic infections. Consultation with an Infectious Disease Specialist is recommended for those with symptoms of infection with ESBL. There is no effective way to “treat” asymptomatic colonization with eradication therapy. Carriers can frequently clear this organism without any treatment.

#### **What are the infection prevention and control considerations?**

Routine Practices are required for all care activities on positive ESBL clients in the community to limit the spread of microorganisms.

Key points include:

- Hand hygiene with soap and water or alcohol based hand rub before and after contact with every client.
- Thorough environmental cleaning, including reusable client care equipment between clients.
- When gloves are used, they must be changed and hand hygiene performed, between procedures and clients.

Refer to WRHA Community IP & C Manual for more detailed protocols.

**Hand washing or using alcohol-based hand rub is the best way to prevent the spread of these organisms.**



## 9.2. Methicillin Resistant *Staphylococcus aureus* (MRSA) Fact Sheet for Healthcare Workers in the Community

### **What is *Staphylococcus aureus*?**

*Staphylococcus aureus* (*S. aureus*) is a bacteria or germ that normally lives on the skin or in the nose of many people. Usually, these individuals are not aware of it and are completely healthy. This is called colonization. It is normal to be colonized with bacteria in many parts of our bodies. *S. aureus* is capable of causing infections from mild skin irritation to severe systemic infections such as pneumonia and bacteremias. *S. aureus* is one of the most common causes of community and hospital acquired infections, and affects individuals of all ages.

### **What is Methicillin Resistant *Staphylococcus aureus* (MRSA)?**

The usual treatment for *S. aureus* infections is a group of antibiotics related to penicillin, which include methicillin, oxacillin and cloxacillin. Over the past 50 years, *S. aureus* has become resistant to multiple antibiotics including this specific group of antibiotics. These resistant bacteria are called Methicillin Resistant *Staphylococcus aureus*, or MRSA. MRSA causes colonization and/or infections similar to antibiotic sensitive *S. aureus* strains. Infections caused by MRSA are sometimes more difficult and expensive to treat because the usual antibiotics cannot be used. Community acquired MRSA (CAMRSA) has increasingly been documented in specific population clusters, e.g. athletes, First Nation communities.

### **What to look for (signs and symptoms of MRSA)?**

For most people, MRSA causes no harm. If symptoms of infection develop, antibiotics should be used in consultation with an Infectious Disease Specialist. Infections caused by MRSA present in the same way as infections caused by non-MRSA.

Symptoms will depend on the site of infection. For example, MRSA can cause an infection in a wound, lung or in the blood, etc.

### **How is MRSA transmitted (spread)?**

MRSA is spread by direct contact with a positive MRSA individual or by indirect contact, e.g. client equipment contaminated with MRSA. MRSA in healthcare can be spread from one person to another by healthcare workers' hands or by sharing contaminated equipment. CAMRSA can be spread from one person to another by hands or contact with contaminated articles, e.g. towels.

### **How is MRSA detected?**

The laboratory can identify MRSA either by a screening swab of the nose or wound or by a clinical specimen obtained from an infected individual. Laboratories perform tests to determine which antibiotics will be effective (sensitive) or not effective (resistant) for treatment. If *S. aureus* is identified as resistant to oxacillin, additional tests are done to confirm the resistance. MRSA are often resistant to multiple commonly used antibiotics.



### **Who is at risk?**

Patients in hospital are at higher risk for acquiring MRSA. Some risk factors are:

- Prolonged hospital stay
- Receiving extended antibiotic therapy.
- Hospitalization in an intensive care or burn unit.
- Exposure to patients with MRSA.
- Exposure to MRSA contaminated equipment.

Clients in the home are not at risk of acquiring MRSA if Routine Practices are followed.

**Healthcare worker/staff:** Healthcare workers are not usually at risk for MRSA colonization/infection, therefore not routinely screened. The chances of colonization/infection with MRSA do not increase even if you have been in contact with an individual with MRSA, e.g. at work. Healthcare workers/staff including pregnant healthcare workers are at minimal risk of acquiring MRSA colonization/infection provided they adhere to Routine Practices and Additional Precautions for the specific situation. If you are immunocompromised the risk is also very small. Please contact Occupational & Environmental Safety & Health if you have concerns about working with clients who are colonized/infected with MRSA.

### **How is MRSA treated?**

Colonized individuals do not routinely need treatment. Treatment of MRSA infections will be directed by the individual's doctor in consultation with an Infectious Diseases Specialist.

### **What are the infection prevention and control considerations?**

Routine Practices are required for all care activities on positive MRSA clients in the community to limit the spread of microorganisms.

Key points include:

- Hand hygiene with soap and water or alcohol based hand rub before and after contact with every client.
- Good environmental cleaning including reusable client care equipment.
- If gloves are used they must be changed and hand hygiene performed between procedures and clients.

Refer to WRHA Community IP & C Manual for more detailed protocols.

**Hand washing or using alcohol-based hand rub is the best way to prevent the spread of these organisms**



### **9.3 Vancomycin Intermediate *Staphylococcus aureus* (VISA) and Vancomycin Resistant *Staphylococcus aureus* (VRSA) Fact Sheet for Healthcare Workers in the Community**

#### **What is *Staphylococcus aureus*?**

*Staphylococcus aureus* (*S. aureus*) is a bacteria or germ that normally lives on the skin or in the nose of many people. Usually, these individuals are not aware of it and are completely healthy. This is called colonization. It is normal to be colonized with bacteria in many parts of our bodies. *S. aureus* is capable of causing infections from mild skin irritation to severe systemic infections such as pneumonia and bacteremias. *S. aureus* is one of the most common causes of community and hospital acquired infections, and affects individuals of all ages.

#### **What are VISA and VRSA?**

The usual treatment for *S. aureus* infections is a group of antibiotics related to penicillin that include methicillin, oxacillin and cloxacillin. Over the last 50 years, some strains of *S. aureus* have become resistant to multiple antibiotics including this specific group of antibiotics. This led to increased use of vancomycin. While most *S. aureus* are susceptible to vancomycin, a few have developed resistance and cannot be successfully treated with vancomycin. These highly antimicrobial resistant *S. aureus* are classified as either VISA or VRSA based on laboratory tests that determine the degree of resistance. In the late 1990's initial cases of VISA and VRSA were reported. VISA and VRSA isolated to date are also methicillin resistant. All VRSA isolates have been identified in individuals with Vancomycin Resistant *Enterococcus* (VRE) colonization/infection isolated in addition to MRSA. It is likely the resistance from VRE was transferred to the MRSA strain, resulting in VRSA. The identification of VISA/VRSA constitutes a "crisis" and requires immediate response.

#### **What to look for (signs and symptoms of VISA/VRSA)?**

The signs and symptoms of infection/colonization with VISA/VRSA are similar to other types of *S. aureus* infections but are very difficult to treat because of limited effective antibiotics.

#### **How is VISA/VRSA transmitted/spread?**

VISA/VRSA is spread by direct contact with a positive VISA/VRSA individual or by indirect contact, e.g. client care equipment contaminated by a person with VISA/VRSA. VISA/VRSA can be spread from one person to another by healthcare workers' hands or by sharing contaminated equipment.

#### **How is VISA/VRSA detected?**

The laboratory can identify VISA/VRSA either by a screening swab of the nose or wound or by a clinical specimen obtained from an infected individual. Laboratories perform tests to determine which antibiotics will be effective (sensitive) or not effective (resistant) for treatment. If *S. aureus* is identified with reduced susceptibility to vancomycin it is called VISA, while *S. aureus* identified as fully resistant to vancomycin is called VRSA.

#### **Who is at risk?**



At present VISA/VRSA infections are rare. Antibiotic use is a major risk factor for emergence of antibiotic resistant organisms (ARO's). Reduction of overuse and misuse of antibiotics will decrease the risk of emergence of *S. aureus* with reduced susceptibility to vancomycin.

Patients in hospital are at higher risk for acquiring VISA/VRSA. Some risk factors are:

- Colonization/infection with MRSA and/or VRE.
- Underlying health conditions, e.g. diabetes, kidney disease.
- Previous infection with VISA/VRSA.
- Presence of IV catheters or other invasive devices.
- Recent hospitalization.
- Recent exposure to vancomycin or other antimicrobial agents.

Clients in the home are not at risk of acquiring VISA/VRSA if Routine Practices are followed.

**Healthcare worker/staff:** Healthcare workers are not at risk for VISA/VRSA colonization/infection, therefore not routinely screened. The chances of colonization/infection with VISA/VRSA do not increase even if you have been in contact with an individual with VISA/VRSA, e.g. at work. Healthcare workers/staff including pregnant healthcare workers are at minimal risk of acquiring VISA/VRSA colonization/infection provided they adhere to Routine Practices & Additional Precautions for the specific situation. If you are immunocompromised the risk is also very small. Please contact Occupational & Environmental Safety & Health if you have concerns about working with clients who are colonized/infected with VISA/VRSA.

#### **How is VISA/VRSA treated?**

Colonized individuals do not routinely need treatment. Treatment of VISA/VRSA infections will be directed by the individual's doctor in consultation with an Infectious Diseases Specialist. Options for treatment may be very limited and costly.

Routine Practices are required for all care activities on positive VISA/VRSA clients in the community to limit the spread of microorganisms.

Key points include:

- Hand hygiene with soap and water or alcohol based hand rub before and after contact with every client.
- Good environmental cleaning including reusable client care equipment.
- If gloves are used they must be changed and hand hygiene performed between procedures and clients.

Refer to WRHA Community IP & C Manual for more detailed protocols.

**Hand washing or using alcohol-based hand rub is the best way to prevent the spread of these organisms.**



## 9.4 Vancomycin Resistant *Enterococci* (VRE) Fact Sheet for Healthcare Workers in the Community

### **What are *Enterococci*?**

*Enterococci* are bacteria found in the bowel of healthy people and usually do not cause illness. This is called colonization. *Enterococci* are capable of causing wound and skin infections, and less often, more serious infections of the blood or other body sites.

### **What is Vancomycin Resistant *Enterococci* (VRE)?**

The antibiotic Vancomycin is sometimes the only antibiotic that is effective in treating serious infections caused by *enterococci*. VRE is a type of *enterococcus* that has become resistant to the antibiotics normally used to kill it, including vancomycin. When vancomycin can no longer kill *enterococci* this means they have become resistant. VRE does not cause more severe infections than other *enterococci*.

### **What to look for? (signs and symptoms of VRE):**

For most people, VRE causes no harm. Infections rarely develop; usually only seriously ill individuals get infections and will depend on the part of the body involved. Symptoms will depend on the site of infection. For example, VRE can cause an infection in the bladder, a wound or in the blood stream.

### **How is VRE transmitted (spread)?**

*Enterococci*, including VRE, are found in the human bowel and are passed from the body through feces. *Enterococci* can be found on people's hands, or on things that are touched such as toilet seats, or client care equipment. VRE is passed from one person to another by direct contact with feces, or indirectly through equipment or items that have become contaminated.

### **How is VRE detected?**

The laboratory can identify VRE either by a screening swab of the rectum/ostomy or by a clinical specimen obtained from an infected individual.

### **Who is at risk?**

Patients in hospital are at higher risk for acquiring VRE. Some risk factors are:

- Prolonged hospital stay in a healthcare facility where VRE cases have been reported.
- Treatment with frequent doses of vancomycin in the past.
- Hospitalization in an intensive care unit.
- Treatment in a dialysis unit.
- Has an indwelling device, e.g. foley catheter.
- Open wounds.
- Major surgery.
- Exposure to clients with VRE or VRE contaminated equipment.



Clients in the home are not at risk of acquiring VRE if Routine Practices are followed.

**Healthcare worker/staff:** Healthcare workers are not usually at risk for VRE colonization/infection. Therefore not routinely screened. The chances of colonization/infection with VRE do not increase even if you have been in contact with an individual with VRE, e.g. at work. Healthcare workers/staff including pregnant healthcare workers are at minimal risk of acquiring VRE colonization/infection provided they adhere to Routine Practices and Additional Precautions for the specific situation. If you are immunocompromised the risk is also very small. Please contact Occupational & Environmental Safety & Health if you have concerns about working with clients who are colonized/infected with VRE.

### **How is VRE treated?**

Healthy people, who are carriers (colonized) with no symptoms of infection do not need treatment. Consultation with an Infectious Disease Specialist is recommended for treatment of individuals who have infection with VRE.

### **What are the Infection Prevention and Control considerations?**

Routine Practices are required for all care activities on positive VRE clients in the community to limit the spread of microorganisms. Key points include:

- Hand hygiene with soap and water or alcohol based hand rub before and after contact with every client.
- Good environmental cleaning, including reusable client care equipment
- When gloves are used, they must be changed and hand hygiene performed between procedures and clients.

Refer to WRHA Community IP & C Manual for more detailed protocols.

**Hand washing or using alcohol-based hand rub is the best way to prevent the spread of these organisms.**





## 10.1 Wash Your Hands Sign – 4.25” x 5.5” - Bilingual

*You can help stop the spread of infection.*

# Wash Your Hands

*Vous pouvez aider à mettre fin à la propagation d'infections*

# Lavez-vous les mains



FORM #W-00205 02/07



Winnipeg Regional Health Authority  
Office régional de la santé de Winnipeg  
Caring for Health À l'écoute de notre santé

11.25

DATE ISSUE: January 15, 2009

REVISION DATE:



## 10.2 Please Use the Hand Rub Provided Sign – 4.25” x 5.5” - Bilingual



You can help stop the spread of infection.

Vous pouvez aider à mettre fin à la propagation d'infections

Please use the hand rub provided

Veillez utiliser le désinfectant pour les mains fourni

FORM #W-00206 09/08



Winnipeg Regional Health Authority  
Office régional de la santé de Winnipeg  
Caring for Health À l'écoute de notre santé



### 10.3 Please Use the Hand Rub Provided Sign – 8.5” x 11” - Bilingual



You can help stop  
the spread of infection.

Vous pouvez aider à mettre fin  
à la propagation d'infections

Please  
use the  
hand rub  
provided

Veillez utiliser  
le désinfectant  
pour les mains  
fourni

