



EXTENDED-SPECTRUM BETA-LACTAMASE (ESBL) PRODUCING BACTERIA

Fact Sheet for Healthcare Professionals

What are ESBLs?

ESBLs are Gram-negative bacteria that produce an enzyme; beta-lactamase that has the ability to break down commonly used antibiotics, such as penicillins and cephalosporins and render them ineffective for treatment. If ESBL-producing bacteria cause an infection, a different antibiotic may need to be used to treat the infection. People who carry ESBL-producing bacteria cause an infection, without any signs or symptoms of infection are said to be colonized. The most common ESBL-producing bacteria are some strains of *Escherichia coli* and *Klebsiella pneumoniae*.

How are ESBLs spread?

ESBLs are spread via direct and indirect contact with colonized/infected patients and contaminated environmental surfaces. ESBLs are most commonly spread via unwashed hands of health care providers.

Risk Factors for ESBLs

Risk factors for ESBL-producing bacterial acquisition include:

- Direct transfer from another hospital, nursing home, retirement home or other health care facility, including between facilities in the same health care corporation
- Any hospital, nursing retirement home or other health care facility admission in the past year
- Patient receiving home health care services or hemodialysis
- Patient living in a communal living setting (e.g. shelter, halfway house)
- Patient who previously had an antibiotic-resistant organism (e.g., MRSA, VRE)

Good Hand Hygiene Practices

Remind all staff and visitors to practice good hand hygiene before and after client/patient/resident contact/care. Health care staff should review the correct method of hand hygiene, as well as demonstrate the proper donning/removal of personal protective equipment (PPE) to clients/patients/residents, families and visitors.

Good hand hygiene practices refer to the use of alcohol-based hand rub or soap and running water for at least 15 seconds.

Hand hygiene should occur:

- Before client/patient/resident or environment contact
- Before performing aseptic procedures
- After care involving body fluids
- After client/patient/resident or environment contact

Prevention and Control of ESBLs

- Consistent use of Routine Practices with all patients/residents/clients
- Initiate Contact Precautions for patients/residents with an ESBL infection
 - Appropriate client/patient/resident placement
 - Gloves for all activities in the patient's room or bed space in acute care, or for direct care of clients/residents in long-term care and ambulatory/clinic settings
 - Long-sleeved gown for activities where skin or clothing will come in contact with the patient or their environment in acute care, or for direct care of clients/residents in long-term care and ambulatory/clinic settings
 - Dedicated equipment or adequate cleaning and disinfecting of shared equipment, with particular attention to management of urinary catheters and associated equipment
- Notify the Infection Prevention and Control Practitioner or delegate to discuss the infection control management of client/patient/resident activities
- Precautions are not to be discontinued until reviewed by Infection Prevention and Control

Family & Visitors

All families/visitors should practice good hand hygiene before and after washing leaving the client/patient/resident room.

Families/visitors who provide direct care are to wear the same PPE as staff. "Direct care" is defined as providing hands-on care such as bathing, washing, turning the client/patient/resident, changing clothes/incontinent pads, dressing changes, care of open wounds/lesions and toileting. Feeding and pushing a wheelchair are not classified as direct care.

Written information should be available for clients/patients/residents that explain the precautions required.

Source: Provincial Infection Control (PIC-NL)

December 2011