

## **Management of Carbapenem-resistant *Enterobacteriaceae* (CRE) in all health care settings**

### **Provincial Infectious Diseases Advisory Committee on Infection Prevention and Control (PIDAC-IPC) CRE webinar questions & answers**

The questions and answers below are representative of the question period and discussion captured following webinars held on August 23, 30, and September 1, 2011. In circumstances where more than one question was asked on one particular topic, Public Health Ontario has included only one question and response.

#### **General questions:**

**1. What are the signs and symptoms of CRE?**

CRE is not a clinical diagnosis but rather bacteria that produce enzymes that make them resistant to carbapenem antibiotics. As such, CRE do not have any specific associated signs and symptoms and most individuals have asymptomatic bowel carriage. In persons infected with an organism that carries CRE, the signs and symptoms would be related to the site of infection and would be the same as any individual with that infection. For example, if the CRE is an *E. coli* and causes a urinary tract infection (UTI), the signs and symptoms would be the same as for any other UTI.

**2. What is public health's role in an outbreak of CRE in acute/long-term care as CRE itself is not considered reportable? Or would this be considered a gastro outbreak in an institution?**

Outbreaks of CRE are not reportable to the local medical officer of health. This is not a gastro outbreak since CRE does not cause diarrheal illness. Public health units should work closely with their health care settings to ensure that they are aware of any outbreaks and the messaging the facility is providing to the public. In some areas, the public health unit and/or regional infection control network may be able to offer the facility advice on management of the outbreak. The Public Health Ontario Laboratory may be needed to assist in the investigation of the isolates. There is a sample outline for management of an outbreak of antibiotic resistant organisms in Annex A, Box 5 page 38 (online document page number).

**3. How do you know they are no longer a risk to staff?**

CRE are not an occupational risk to health care staff as long as they consistently follow routine practices and practice good hand hygiene.

**4. Since ESBL is a good surveillance tool to track CRE, will we see ESBL mandated as part of the active surveillance in the future?**

PIDAC-IPC recommends an effective and consistent approach to surveillance for ESBLs. PIDAC-IPC does not mandate surveillance activities. PIDAC-IPC recommendations for CRE surveillance are more directive than for ESBL because there are poor treatment options for CRE, whereas ESBL can be treated with carbapenem and sometimes other antimicrobials.

**Screening:**

**1. Is routine screening necessary in long-term care (LTC)?**

PIDAC recommends that patients/residents be screened based on a risk assessment. If a resident is being admitted to LTC who has one of the risks for acquisition of CRE, they should be screened.

**2. Admission screening criteria for NDM – previous visit to Indian subcontinent within the last how many months?**

There is simply not sufficient evidence to make a determination on how far back you should look. At this time, PIDAC-IPC recommends you use the timeframe that you use for all ARO screening.

**3. If CREs are in New York hospitals, how far back do we ask for the hospitalization, e.g. recent hospitalization, less than six months ago, more than 12 months ago, less than 12 months?**

At this point in time, PIDAC-IPC suggests you use the same timeframe that you use to screen all patients for an ARO. There is a screening tool that PIDAC-IPC has developed which will be available in the updated Annex A in early 2012.

**4. Should we be hunting for CRE or keeping an eye out for this? Perhaps starting with hospitals would be a wise start. If it is in our area, then we can follow-up.**

PIDAC-IPC recognizes that we have a window of opportunity to prevent CRE from becoming wide-spread in our institutions. We recommend all hospitals implement screening based on risk. If CRE has been identified in a hospital in your area or if you are admitting a resident with risk factors to your LTC home then you should consider screening those residents with risk factors.

**5. Are we to screen for CRE upon admission and re-admission from hospital?**

Screening for CRE should be done based on risk factors. Individuals with risk factors should have screening specimens obtained.

**6. Does the client need to be re-screened, such as with MRSA, if they are in hospital for an extended period of time?**

Patients in acute care who have CRE should remain on contact precautions for the duration of the acute care hospitalization. At the present time, we do not know how long colonization with CRE may last so have not recommended a period of time to re-screen; however, colonization is likely to be long term.

**7. Does a resident in LTC need to be re-screened i.e. every 6-12 months?**

We really do not have the answer to that. It is one of the many questions that we simply do not have enough evidence to make a recommendation on. As we accumulate more evidence we will update the annex to reflect that. So, we need to recognize that the frequency of re-screening in LTC is arbitrary but PIDAC-IPC would not recommend it be any more frequent than every six months.

**8. Can you please recommend the wording for screening for CRE on admission? Our organization already asks patients if they have been in a hospital over the last 12 months.**

The risk factors for CRE are the same as those for other AROS with the exception of the geographic areas where CRE are endemic. Screening forms should reflect those areas to identify risk factors. Having said that, these areas will change and PIDAC-IPC will update Annex A as this occurs.

**9. What is meant by 'recent' exposure to the high risk areas... in the past 12 months?**

Again, we don't have evidence to give us an exact time frame so some of this is arbitrary and will change as new evidence is provided. At this time, it is reasonable to use a 12 month timeframe for screening for risk.

**10. Can you please clarify the difference between risk for screening and pre-emptive contact precautions?**

Screening specimens should be obtained when an individual is identified to have risk factors for CRE acquisition. This is screening based on risk. Those individuals who have risk factors and thus have screening specimens obtained should be placed on contact precautions until the results of the screening specimens have been received and are negative for CRE.

**11. Do you recommend screening pre-op patients who are having day surgery?**

There are no recommendations for ambulatory patients at this time.

**12. Since there have been cases identified in the GTA, would patients receiving health care in that area be considered at risk?**

Communication between facilities is extremely important. If you are notified that a patient has received care where there is an outbreak of CRE then they should be screened. If that is not the case, then they should be screened for the identified risk factors only. At this time the number of cases in Ontario hospitals is small and does not warrant a recommendation to screen all patients from a specific area of the province.

**13. Should CCAC adopt a question into their interviews questioning if someone has received health care in another country?**

A screening tool posted on the Public Health Ontario website that can be adapted for use in specific settings.

**14. Any recommendations for community health centres regarding routine screening for those with risk factors and for the homeless or those precariously housed?**

PIDAC is not recommending screening for ambulatory settings such as community health centres. The focus should be on diligent application of routine practices and hand hygiene.

**Management:**

**1. Just wondering about home care precautions? Are there any implications for patients receiving home care?**

The home care environment is different from both acute and long-term care. We need to recognize that this is the client's own home and thus their environment is larger. The focus in the home care/community setting should be on diligent use of routine practices and hand hygiene. This includes using the protective barriers appropriately and practicing hand hygiene as indicated in the 4 Moments for Hand Hygiene.

**2. I am also wondering about the duration of home care precautions?**

CRE is spread through contact. Our emphasis should be on consistent use of routine practices and hand hygiene. At this point in time it is uncertain how long colonization may last so the focus is on ensuring that staff use the appropriate practice at all times.

**3. What about pre-hospital precautions?**

Pre-hospital providers are frequently not aware of colonization status of their patients. Thus the emphasis needs to be on diligent use of routine practices and hand hygiene for all patients.

**4. What should you do in LTC if you don't have a private room?**

In LTC, PIDAC-IPC recommends a modified version of contact precautions. We recognize that many long-term care homes (LTCH) do not have private rooms and this is the resident's home. Avoid placing CRE positive residents with residents who may be placed at risk (i.e. have urinary catheters, feeding tubes, require extensive hands-on care, or have poor hygiene practices) when determining placement of a resident with CRE in a LTCH. The CRE positive resident and their family should be educated about the importance of hand hygiene and personal hygiene, particularly with regard to toileting.

**5. Is the environmental cleaning protocol for CRE the same as for ESBL and MRSA?**

Environmental cleaning for CRE patients is no different than your regular cleaning protocols. The key, as with all cleaning, is to ensure that the procedure is done correctly using the appropriate product and contact time. This is also the case for ESBL and MRSA.

**6. Any suggestions for LTC homes?**

At this time there is limited evidence on CRE and a small window of opportunity to limit the impact this may have on our health care system. Communication between acute and long-term care is essential in ensuring that we provide safe care. Consider your home's ability to manage residents who might be colonized and use this opportunity to ensure that staff have the supplies and training in routine practices and hand hygiene that they need to care safely for any resident who may present to your setting.

**Laboratory:**

**1. If the health care facility laboratory is unable to detect CRE, can the specimen be sent to PHL?**

Each infection prevention and control program should initiate a discussion with their laboratory about whether they are able to detect CRE. There is a microbiology group working to provide information to laboratories about methods for detecting CRE and a videoconference has been held on this topic. Your laboratory should develop a plan for what they will do in the eventuality that a patient with risk factors is admitted and requires screening.

**2. What selective media do you recommend for screening for CRE for stools?**

Your laboratory will identify the appropriate method to use to identify CRE. If they are unsure they should contact the public health laboratory or an academic health science centre laboratory.

- 3. Are the laboratories going to be cooperative with so many facilities asking for 6-12 months retroactive CRE results? If so, how can this be done when the samples are long gone?**

You should initiate a discussion with your laboratory to determine whether they can provide you with this information. Most laboratories will have records of the isolates that have been identified within their laboratory.

- 4. Do we put the swab in a culture medium? How is the specimen stored after collection?**

Check with your laboratory for the process to be used in collecting and storing specimens.