2019 Point Prevalence Survey in Canadian Long Term Care Facilities

Information Session

Centre for Communicable Diseases and Infection Control
Public Health Agency of Canada
Overview of this session

Objectives and scope of the project
Data collection
How to register
Next steps
Questions
Why are we launching this survey?

- New surveillance initiatives are being implemented to address gaps in knowledge on AMR and AMU at the community level, including non-hospital settings such as long term care (LTC)
- Infections caused by drug resistant bacteria are a growing concern in LTC facilities
- Limited knowledge about prevalence of antimicrobial resistant organisms (ARO) in LTC across Canada
- This will be the first project coordinated at a national level to examine AMR and AMU in LTC

**Canadian Antimicrobial Resistance Surveillance System (CARSS)**

- National coordinating program for surveillance systems on antimicrobial resistance (AMR) and antimicrobial use (AMU)
- Commitment to address AMR and AMU as part of the Pan-Canadian Framework for Action
What is a “point prevalence survey”?

- Cross-sectional approach- information is collected at one point in time to provide a “snapshot” in a selected population
- Feasible for surveillance purposes, and can be repeated to monitor changes over time

Objectives

- Determine the prevalence of selected AROs among residents in LTC
- Describe the epidemiology of infection or colonization with AROs
- Examine prevalence of antibiotic use among residents in LTC, including types of drugs used and reasons for taking them
- Understand antimicrobial stewardship activities and practices related to AROs in LTC facilities
Focus on bacterial infections

- *Clostridioides difficile* infection (CDI)
  - Formerly known as *Clostridium difficile*
- Urinary tract infection
- Respiratory tract infection
  - Excluding: common cold, influenza-like illness
- Blood stream infection
- Skin, soft tissue and mucosal infection
  - Excluding: scabies, fungal infections, herpesvirus skin infections, gastroenteritis

Standard surveillance case definitions

Selected antimicrobial resistant organisms (ARO)

- *Clostridioides difficile*
- Methicillin-resistant *Staphylococcus aureus* (MRSA)
- Vancomycin-resistant enterococci (VRE)
- Extended spectrum β-lactamase-producing (ESBL) gram-negative bacteria
- Carbapenemase-producing organisms (CPO)

AMU focus on *antibacterials* for systemic use

- Known as “J01” class drugs
- Includes all major groups of antibiotics and other antibacterial products (e.g. metronidazole, sulfa/trimet, nitrofurantoin, vancomycin)
- No antifungal or antiviral products
Can your facility participate?

**Inclusion criteria for LTC facilities**

- Provide long term care (non-acute health care) to residents needing at least some level of medical or professional nursing supervision
- Have 24 hour on-site professional nursing care
- Not part of a hospital, or residents must be physically distinct from acute-care patients (i.e. separate building)
- At least 30 beds

The facility *may also* provide rehabilitation and/or complex continuing care, but all above criteria must be met
How will the survey work?
Survey period

Data collection will be open **March 4 to May 3, 2019**

LTC facilities choose one day during the survey period as the “prevalence day”

- 24 hours starting at 8:00 am and ending 8:00 am the following day
Activities

On the prevalence day
- Take a census (count of total residents present at 8:00 am)
- Identify residents that meet at least one of the selection criteria over the 24 hour period

After the prevalence day
- Complete a questionnaire for each selected resident
- Fill out a short questionnaire about your facility
- Enter data into an online survey platform within 2 weeks
Facility census

- Residents living full-time in the facility
- Present at 8 am on the prevalence day
- Not away overnight on the prevalence day

Selected residents entered in survey

- Have an infection, or are known to be colonized with one of the AROs on the prevalence day
- OR
- Using at least one antibiotic on the prevalence day
Facility questionnaire

- One questionnaire per facility
- Anonymous code (Facility ID) provided by IPAC Canada
- Other sections of the questionnaire: ARO practices, antimicrobial stewardship activities, outbreaks

<table>
<thead>
<tr>
<th>Facility ID:</th>
<th>Census date:</th>
</tr>
</thead>
</table>

### A. Facility information

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of beds:</td>
<td></td>
</tr>
<tr>
<td>Number of residents present at 8am and not away overnight on day of prevalence (total number on census):</td>
<td></td>
</tr>
<tr>
<td>Number of residents entered in the survey:</td>
<td></td>
</tr>
</tbody>
</table>

In addition to long-term care and 24 hour nursing care, do you have any of these services at your facility? (select all that apply):
- Rehabilitation
- Complex continuing care (e.g. renal dialysis, mechanical ventilation, spinal cord injury care)
- Other, please specify:

Do you have at least one staff at your facility who is a trained Infection Control Professional (ICP)?
- Yes
- No
Resident questionnaire

A. Current infection

<table>
<thead>
<tr>
<th>What type of infection does the resident have? (please select one):</th>
<th>What organism is the cause of this infection? (please select one):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary tract infection</td>
<td>MRSA</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>VRE</td>
</tr>
<tr>
<td>Other respiratory tract infection</td>
<td>ESBL</td>
</tr>
<tr>
<td>Skin/soft tissue infection</td>
<td>CR0</td>
</tr>
<tr>
<td>Bloodstream infection</td>
<td>C. difficile</td>
</tr>
<tr>
<td>C. difficile infection</td>
<td>Other (specify):</td>
</tr>
<tr>
<td>Other (specify):</td>
<td>Unknown / not tested</td>
</tr>
<tr>
<td></td>
<td>Sample submitted for testing</td>
</tr>
</tbody>
</table>

D. Antibiotic use

Please indicate which antibiotic(s) the resident is taking on the day of the survey. Write the name of each drug in the space below:

<table>
<thead>
<tr>
<th>Antibiotic 1:</th>
<th>Antibiotic 2 (if applicable):</th>
</tr>
</thead>
</table>

Why is the resident taking the antibiotic?

- To treat infection described in section A
- To treat another infection or condition
- To prevent infection
- Other, please specify:

Other sections of the questionnaire: type of accommodation, previous infection or colonization, infection control measures, medical devices

- One questionnaire per resident entered in survey
- Anonymous code (Resident ID) assigned by facility - no chart/health care numbers
Privacy considerations

No identifying information will be collected about residents
- Age and sex of resident
- The Resident ID is an anonymous code and it will not be possible for PHAC or IPAC Canada to link data back to a specific resident

The census is an internal document for use by the LTC facility only
- Used by LTC staff to identify which residents are entered in the survey, and to assign Resident ID codes
- Not submitted to IPAC Canada or PHAC

Results for each facility will be analyzed using the Facility ID only
- PHAC will not be able to link the Facility ID to specific sites
What happens after data is submitted?

• Online platform open until May 17, 2019

• Data validation, cleaning and analysis conducted by PHAC

• Results from all facilities will be rolled into one national report

• Facilities will receive a report about their own results to inform practices, benchmarking and targets

• Opportunity to provide feedback to improve future phases of the project
AMR results from pilot survey (2017)*

*Small sample; not published

2.4% of LTCF residents had an infection on the day of the survey.

Distribution of infection types:

- UTI: 45%
- SSTI: 28%
- RTI: 17%
- Other: 10%

14% of the infections were caused by antimicrobial resistant organisms (AROs).
(n=3 ESBL; n=1 MRSA)

8.6% of LTCF residents were infected or colonized with an ARO in the past 24 months.

Distribution of AROs:

- MRSA: 59%
- ESBL: 28%
- Other: 8%
- VRE: 3%
- CPO: 2%

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**AMU results from pilot survey (2017)**

*Small sample; not published*

4.2% of LTCF residents were on at least one antimicrobial on the day of the survey.

### Distribution of antimicrobials used:

<table>
<thead>
<tr>
<th>Antimicrobial</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Gen. Cephalosporins</td>
<td>31%</td>
</tr>
<tr>
<td>Penicillins</td>
<td>18%</td>
</tr>
<tr>
<td>Fluoroquinolones</td>
<td>16%</td>
</tr>
<tr>
<td>Sulfa/Trimet</td>
<td>10%</td>
</tr>
<tr>
<td>Nitrofuratoin</td>
<td>10%</td>
</tr>
<tr>
<td>Tetracyclines</td>
<td>8%</td>
</tr>
<tr>
<td>Animoglycosides</td>
<td>4%</td>
</tr>
<tr>
<td>Metronidazole</td>
<td>4%</td>
</tr>
<tr>
<td>2nd Gen. Cephalosporins</td>
<td>4%</td>
</tr>
<tr>
<td>Vancomycin</td>
<td>2%</td>
</tr>
</tbody>
</table>

### Indication for use:

- **Treat current infection**: 48%
- **Treat other condition/infection**: 23%
- **Prevention**: 29%
Next steps
Watch out for an email announcement from IPAC Canada

Help us better understand antimicrobial resistance in Canada

Be part of Canada’s first national survey to understand antimicrobial resistance and use of antibiotics among residents in long term care.

REGISTER

Infections with drug resistant bacteria are a growing problem in long term care facilities. To respond to this growing concern, a national survey—the first of its kind—is being launched to understand and act on this issue.
How to register

Go to the registration page on the IPAC Canada website:

- Click on the “Register” button directly from the email announcement
- Click on web banner or registration buttons on IPAC Canada website
- Link: https://ipac-canada.org/ltc-point-prevalence-survey.php

Fill out your facility and contact information

Registering will allow us to coordinate a training session with you

- Several webinar dates to choose from
- Participation is voluntary: you can still decide after the training whether your facility will participate
- Facilities can sign up any time throughout January – April
What will be covered in the training session?

- Step by step overview of all activities
- How to do the facility census
- Assigning anonymous resident codes
- Guidance on completing questionnaires
- Orientation to the online data entry platform
- How to access support during data collection
Members of the IPAC Canada Long Term Care Interest Group who helped develop the protocol and questionnaires:

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