PHO - Guided Tour

“We’re all in this together”

Virginia Tirilis
April 7, 2016
Route Itinerary:

1) Express route through FIND IT FAST
2) Top of the LINE
3) Infection Prevention & Control Resources Outlet Mall
4) SCENIC TOUR: Reprocessing in the Community
5) DETOUR: CRMD tools (Construction, Renovation, Maintenance & Design)
6) LATEBREAKING resources – Antimicrobial Stewardship!
FIND IT FAST

Data Reports: Surveillance (Routine & Annual); Population Health Assessment

Knowledge synthesis & education; Health promotion capacity building; Applied public health research

Videos, education, training & tools for acute care and long term care; FAQs; support; links

Testing; Reports; Locations

(Next slide)
Provincial Infectious Diseases Advisory Committee (PIDAC)

The Provincial Infectious Diseases Advisory Committees were established in 2004 in response to recommendations by the Expert Panel on SARS and Infectious Disease Control. As a standing source of expert advice on infectious diseases in Ontario, PIDAC has created best practice documents, reports and recommendations on matters related to communicable diseases, immunization, infection prevention and control and surveillance.

PIDAC continues to focus efforts on developing evidence-informed products that meet the needs of public health agencies, government decision-making bodies, and those working to protect and promote the health of Ontarians.
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Best Practice Documents

Best practice documents are intended for use by health care workers and facilities/organizations providing health care including hospitals, long-term care facilities and community-based health care organizations. Recommendations in best practice documents are developed through reviews of literature and consultations with experts in infectious disease, surveillance, communicable disease and immunization.

Best Practices for Prevention, Surveillance and Infection Control Management of Novel Respiratory Infections (September 2015)

Infection Prevention and Control in Perinatology (February 2015)

Surveillance of Health Care-associated Infections (July 2014)


Infection Prevention and Control for Clinical Office Practice (June 2013)

Cleaning, Disinfection and Sterilization of Medical Equipment/Devices (May 2013)

Routine Practices and Additional Precautions / Annexes A, B & C (November 2012)

Environmental Cleaning for Prevention and Control of Infections (May 2012) - under review

Infection Prevention and Control Programs in Ontario (May 2012)

Sexually Transmitted Infections Case Management and Contact Tracing (April 2009) - under review
Environmental Cleaning for Prevention and Control of Infections (May 2012) - under review

This best practice document deals with cleaning and disinfection of the physical environment in health care as they relate to the prevention and control of infections. It is targeted to those who have a role in the management of cleaning/housekeeping services for the health care setting. This includes administrators, supervisors of ES departments, infection prevention and control professionals, supervisors of construction/maintenance projects and public health investigators. This document is current as of May 2012 and is currently under review.

Download Document »

Related resources:

- Environmental Cleaning Toolkit
- IPAC Intersections: Environmental Services and Infection Prevention and Control Scenario Work Book
Recommendations:

51. Health care settings must have a plan in place to deal with the containment and transport of construction materials, as well as clearly defined roles and expectations of Environmental Services and construction staff related to cleaning of the construction site and areas adjacent to the site. [AII]

52. All health care settings must have a plan in place to deal with a flood. [AII]

53. Infection Prevention and Control, Environmental Services and Occupational Health and Safety must be consulted before making any changes to cleaning and disinfection procedures and technologies in the health care setting. [BIII]

54. Surfaces treated with antimicrobial substances are not recommended. [CIII]
Start from the TOP

Next Stop
Infection Prevention and Control (IPAC)

Infection Prevention and Control (IPAC) refers to those evidence-based practices and procedures that can prevent or reduce the risk of transmission of microorganisms to health care providers, other clients:

- Reprocessing in the Community Online Learning Course
- Available for Comment: PIDAC document on Duodenoscopes
- IPAC Core Competencies Online Learning Course
- Ontario Health Profile: Stop Health Care-Associated Infection
Online Learning

Public Health Ontario provides educational courses and modules which are accessible from wherever and whenever the learner is available.

Health Promotion

Online courses and audio presentations designed to build capacity for evidence-informed health promotion practice.

Infection Prevention and Control

Resources to assist health care organizations to adopt good infection prevention and control practices.

Go to Course List »
IPAC Resources
IPAC Core Competencies
Online Learning Course

IPAC core competencies are basic knowledge and skills all health care workers in Ontario need to possess about infection prevention and control, regardless of their role or position, education, experience or culture.

Find out more
Ontario Health Profile: Stop Health Care-Associated Infection


Find out more
Available for Comment: PIDAC document on Duodenoscopes

Annex A - Minimizing the Risk of Bacterial Transmission from Patient to Patient when using Duodenoscopes is available for scientific comment.

Find out more
Provincial Infectious Diseases Advisory Committee (PIDAC)

Learn more about Provincial Infectious Diseases Advisory Committee (PIDAC) as well as the available PIDAC resources.

See all PIDAC resources
IPAC for Clinical Office Practice

Best Practices for Infection Prevention and Control for Clinical Office Practice

See all clinical office practice resources
Environmental Cleaning

Best Practices for Environmental Cleaning for Prevention and Control of Infections

See environmental cleaning toolkit
Hand Hygiene

Learn more about the **best practices** for **hand hygiene** as well as the available hand hygiene resources.

**See all hand hygiene resources**
Antimicrobial Stewardship

Learn more about Antimicrobial Stewardship (AS) as well as the available antimicrobial stewardship resources.

See all AS resources
Carbapenemase Producing Enterobacteriaceae (CPE)

Learn more about the management and surveillance of CPE as well as the available CPE resources.

See all CPE resources
Urinary Tract Infections (UTIs)

Urinary tract infections (UTIs) are the most commonly reported bacterial infection in long-term care homes (LTCHs) and are often treated with antibiotics. However, while some bacteria may be present in the urine of elderly patients, asymptomatic bacteriuria may not need antibiotic treatment. Overuse of antibiotics to treat asymptomatic UTIs is contributing to increased antimicrobial resistance in LTCHs.

The following resources have been developed to assist LTCHs in identifying, managing and preventing UTIs. For more information, please contact ipac@oahpp.ca

**UTI Resources**  
For Health Care Providers

- Asymptomatic bacteriuria fact sheet
- When to collect a urine specimen
- How to collect a urine specimen mid-stream
- Communicating with residents and families

**UTI Resources**  
For Residents and Families

- Frequently asked questions
- How to collect a urine specimen
When To Collect A Urine Specimen For Culture And Sensitivity

Non-catheterized resident

Send a specimen if the resident has the following symptoms:

Acute dysuria (painful urination) alone

AND/OR

\*Fever and one of the following:

- New or worsening urgency/frequency
- Suprapubic pain
- Gross hematuria
- Costovertebral angle tenderness
- Urinary incontinence

Catheterized resident

Send a specimen if the resident has the following symptoms:

Presence of at least one of the following:

- Fever*
- New costovertebral tenderness
- Rigours with or without identified cause
- New onset of delirium

\*Fever means oral temperature greater than 37.9°C or 1.5°C above baseline on 2 consecutive occasions within 12 hours

Do not collect a specimen unless the resident has symptoms of a urinary tract infection

- Pyuria or cloudy urine
- Fever (if non-catheterized)
- Smelly urine
- Change in urine colour
- Positive dipstick
- Dehydration
- Change in mental status
- Change in behaviour or function
- Falls
- Family request

Do Not Send A Specimen For Any Of The Following Factors Alone:


Collecting Mid-Stream Urine Specimen

1. Use an approved empty sterile container.

2. Label the container with the following:
   - Resident’s full name
   - Resident’s date of birth
   - Date and time of collection
   - Resident’s unit or ward and room number

3. Complete the requisition according to the laboratory protocol and insert the requisition in the outside pouch of a clear plastic transport bag.

4. Perform hand hygiene and put on gloves.

5. Remove the lid from the empty container and carefully set the lid upside down, making sure not to touch the inner surface of the lid.

6. Instruct the resident to pass a small amount of urine into the toilet (this initial stream of urine may be contaminated with skin and urethral bacteria). Then, collect urine from the stream into the container. Fill the container ⅔ to ¾ full—do not overfill. This is a mid-stream urine specimen.

7. Put the lid on the container and secure it tightly.

8. Place the specimen container in the sealable pouch of the clear plastic transport bag.

9. Remove gloves and perform hand hygiene.

10. Place immediately in specimen refrigerator.
    Keep the urine sample refrigerated and submit it to the laboratory within 24 hours of collection.
Infection Prevention and Control

Reprocessing in Community Health Care Settings

The Reprocessing in the Community course is intended for health care providers who perform reprocessing tasks (cleaning, disinfection and sterilization of reusable medical equipment/devices) in community settings.

Go to Course >>

IPAC Core Competencies Online Learning Course

Infection Prevention and Control (IPAC) core competencies are basic knowledge and skills all health care workers in Ontario need to possess about infection prevention and control, regardless of their role or position, education, experience or culture.

Go to Course >>
Reprocessing in the Community
Self-directed Online Course

Modules

• Introduction to Reprocessing
• PPE for Reprocessing
• Pre-cleaning, Cleaning and Post-cleaning
• Disinfection
• Packaging for Reprocessing
• Loading a sterilizer
• Sterilization
• Unloading a Sterilizer
• Transportation and Storage

Features

• Self-paced learning
• Step-by-step demonstration
• Engaging activities
• Work related scenarios
• Interactive content
• Intuitive user interface

http://www.publichealthontario.ca/en/LearningAndDevelopment/OnlineLearning/InfectiousDiseases/Reprocessing/Pages/default.aspx
Construction, renovation, maintenance and design (CRMD)

- PIDAC Documents
- IPAC Signage and lanyard cards
- JCYH videos
- Environmental Cleaning Toolkit
- Urinary Tract Infections (UTIs)
- Best Practices for Clinical Office Practice
- Best Practices for RP/AP
- Best Practices for Environmental Cleaning
- 4 Moments for Hand Hygiene (mini module)
- 4 Moments for Hand Hygiene (pocket cards)
Planning phase

ICPs need to be involved at the project planning phase to ensure that IPAC risks are identified and mitigated. The tools below will assist in the planning phase.

Presentations:

- CRMD planning phase (This presentation identifies the ICP’s role and highlights key IPAC components in the planning phase)

Checklists:

- ICP responsibility
- Hoarding
- Infection control risk assessment (ICRA)
- Choosing human-waste systems
- Managing traffic flow

Guides:

- Environmental cleaning of health care facilities
- Requirements for space in health care facilities
- Design and planning consideration

Information sheets:

- Comparing human-waste systems
ICPs need to be routinely involved in the ongoing work phase of the project. The frequency will depend on the scope of the project and the risk that was identified in the planning phase. The tools below will assist during the work phase.

**Presentations:**

- **CRMD work phase** (This presentation identifies the ICP's role and highlights key IPAC components in the work phase)

**Checklists:**

- Removing construction debris
- ICP responsibility
- Hoarding
- Managing traffic flow

**Guides:**

- Environmental cleaning of health care facilities
Commissioning phase

Commissioning ensures final checks and balances needed for completion prior to occupancy although it may occur throughout a project. The tools below will assist in ensuring the IPAC requirements have been met and the area is safe for occupancy by staff, patients and visitors.

Presentations:

- CRMD commissioning phase (This presentation explains the commissioning process, how to identify IPAC deficiencies, and the importance of post occupancy monitoring)

Checklists:

- Commissioning
- ICP responsibility
- Hoarding

Guides:

- Environmental cleaning of health care facilities

Download All »
Sample Checklist: Hoarding

When to use this checklist:

- Planning phase
- Work phase
- Commissioning phase

Hoarding refers to the construction of temporary sealed, airtight barriers to separate areas under construction and/or renovation from other areas of the health care facility. Use this checklist to assess the placement and maintenance of barriers according to the preventive measures level assigned to the construction/renovation project and as a reference document in the bidding process to contractors.

<table>
<thead>
<tr>
<th>Preventive measures level</th>
<th>Task</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Measures identified to minimize dispersed dust</td>
<td></td>
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<td></td>
<td>Type of measures:</td>
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<tr>
<td></td>
<td>Patient-care equipment protected</td>
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<tr>
<td>II</td>
<td>All Level I requirements must be implemented and the following measures put in place:</td>
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<td></td>
<td>Windows, doors, shafts, access panels, electrical outlets, intakes, grilles, vents, plumbing drains and all other penetrations in the floors, walls and ceilings: Sealed with duct tape</td>
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<td></td>
<td>Entrance and exit doors: Double-flap polyethylene sheeting of a minimum 0.15mm (6 mil) true thickness weighted at the bottom over doors. Each sheet covers the entire cross-section of the entrance to work area and opens in both directions</td>
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<td></td>
<td>Construction area entrance and exit: Placement of walk-off mats</td>
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<tr>
<td>Preventive measures level</td>
<td>Task</td>
<td>Yes</td>
<td>No</td>
<td>N/A</td>
<td>Comments</td>
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<tr>
<td>II</td>
<td>Carpeted or textured floors: Polyethylene sheeting of a minimum 0.30mm (12 mil) thickness or two 0.15 mm (6 mil) sheets layered one on top of the other. Vertical sheeting overlaps the horizontal base sheet of polyethylene</td>
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<td>Textured, perforated, or drop ceilings: Covered with polyethylene placed on the inside of vertical sheeting and taped with a continuous seal</td>
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<td>HVAC systems: Supply and return-air ducts into the construction area are blocked off/sealed or isolated. Conduct HVAC system shutdowns in accordance with CSA Standard Z317.2-12</td>
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<td></td>
<td>Barriers: Extended to the true ceiling</td>
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<td>Polyethylene sheeting: Reinforced where necessary with framing (metal or wood), poles</td>
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<td></td>
<td>Dust control: Used 0.15 mm (6-mil) fire-retardant polyethylene barriers</td>
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<tr>
<td>III</td>
<td>All Level 1 &amp; II requirements must be implemented and the following measures put in place:</td>
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<td>From floor to the underside of the deck: Impermeable dust barrier erected consisting of two layers of 0.15 mm (6 mil) polyethylene and a gypsum wallboard or drywall protective layer</td>
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<td>From true ceiling to the floor and around the entire perimeter of the construction area: Used continuous polyethylene sheeting wall, minimum of 0.15mm (6 mil) thickness</td>
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<td></td>
<td>Construction area: Enclosed by dust barriers comprising 2 layers of 0.15 mm (6-mil) fire-retardant polyethylene and 1 layer of drywall</td>
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<td></td>
<td>Continuous tape seal of gypsum wallboard to floor and ceiling</td>
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<tr>
<td>Preventive measures level</td>
<td>Task</td>
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<td>No</td>
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<tr>
<td>III</td>
<td>Continuous tape seal of polyethylene to floor and ceiling</td>
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<td></td>
<td>Continuous tape seal on both sides of polyethylene</td>
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<td></td>
<td>Between construction area and facility: Electronic monitoring of pressure differentials</td>
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<td></td>
<td>Between construction area and facility: Checked for air leakage paths</td>
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<tr>
<td></td>
<td>Between construction area and facility: Windows and doors sealed with 2 layers of 0.15 mm (6 mil) polyethylene and 1 layer of drywall</td>
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<tr>
<td></td>
<td>Mechanical equipment and materials: Protected from dust and moisture exposure</td>
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<tr>
<td>Anteroom</td>
<td>Constructed at access point to construction area</td>
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<td></td>
<td>Large enough to accommodate materials and supplies without having to open both doors at the same time</td>
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<td></td>
<td>Walls built of metal studs, the bottom track sealed to the flooring, 2 layers of 0.15 mm (6 mil) polyethylene sealed to the studs, one on either face and protected with drywall with a washable surface</td>
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<td></td>
<td>Walls constructed of material resistant to moisture</td>
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<td>Dust barriers extend to the true ceiling or have their roofs constructed in the same manner as Preventive Measure III barriers. Roof is constructed to protect against overhead hazards</td>
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<td></td>
<td>Hollow metal lockable doors with door-closure device. Frame and bottom sealed with weather-stripping</td>
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<tr>
<td>Preventive measures level</td>
<td>Task</td>
<td>Yes</td>
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<tr>
<td>IV</td>
<td>All Level I, II &amp; III requirements must be implemented and the following measures put in place:</td>
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<td></td>
<td>All barriers remain in place until project completed and area thoroughly cleaned by environmental services and inspected by the ICP</td>
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<td></td>
<td>Holes in walls or breaches in the polyethylene containment system repaired immediately when found. If temporary repair made, permanent repair made within 2 hrs</td>
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<td></td>
<td>Short-term protection used when removing barrier walls to minimize environmental contamination during removal</td>
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</tbody>
</table>
LATEBREAKING!

Extra Route
Added
**Antimicrobial Stewardship**

PHO promotes and supports antimicrobial stewardship as an effective strategy for limiting inappropriate and excessive antimicrobial use, while improving and optimizing antimicrobial therapy and clinical outcomes for patients. Since 2013, Accreditation Canada mandates that all acute care facilities have an antimicrobial stewardship program (ASP).

There are a number of ways to initiate and sustain an ASP. Click on the links below to find resources and tools to help build your stewardship program.

For more information contact us at asp@oahpp.ca.

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**Antimicrobial stewardship strategies**

This section features 32 strategies to help you build, grow and enhance your antimicrobial stewardship program.

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**Building your program**

**Exploring ASP in action**

**The Antimicrobial Stewardship Advisory Committee (ASAC)**
Select your strategies

To help determine the strategies best suited to your institution, you can sort them by several criteria:

- **Priority level**: high, medium or low priority (A, B or C)
- **Difficulty level**: easy, intermediate or difficult to implement (1, 2 or 3)
- **PHO core strategy**: identified by PHO’s ASP team as important foundations of an institutional ASP
- **Those with evidence to support** certain antimicrobial stewardship outcomes
- **Program stage**: early, intermediate or advanced

To learn more about the development of the criteria, please refer to the Antimicrobial Stewardship Strategy Criteria Reference Guide.

### 32 Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Priority level</th>
<th>Difficulty level</th>
<th>PHO core strategy?</th>
<th>Evidence to support specific outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antibiograms</td>
<td>A</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automatic stop orders</td>
<td>C</td>
<td>1</td>
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<td></td>
</tr>
</tbody>
</table>
## Antibiograms
Facilitation of appropriate and timely antimicrobial administration in severe sepsis/septic shock

## Automatic stop orders
Formulary automatic substitution/therapeutic interchange policies

## Cascading microbiology susceptibility reporting
Formulary restriction

## Checklists
Formulary restriction with preauthorization

## Clinical decision support systems/computerized physician order entry
Formulary review/streamlining

## De-escalation and streamlining
General antimicrobial order forms

## Disease-specific treatment guidelines/pathways/algorithms and/or associated order forms
Identification of inappropriate pathogen/antimicrobial combinations ("bug-drug mismatch")

## Dose optimization
Improved antimicrobial documentation

## Drug use evaluation/medication use evaluation
Improved diagnostics

## Empiric antibiotic prescribing guidelines
Intravenous to oral conversion

## Preventing treatment of non-infectious conditions
Prescriber education

## Promotion of timely and appropriate microbiologic sampling
Therapeutic drug monitoring (with feedback)

## Prospective audit with intervention and feedback
Targeted review of patients with *Clostridium difficile* infection

## Scheduled antimicrobial reassessments ("antibiotic time-outs")
Targeted review of patients with bacteremia/fungemia

## Strategic microbiology results reporting
Targeted review of redundant therapy or therapeutic duplication

## Surgical antibiotic prophylaxis optimization
Systematic antibiotic allergy verification
Antimicrobial Stewardship Strategy: Intravenous to oral conversion

Promoting the use of oral antimicrobial agents instead of intravenous administration when clinically indicated.

Description

This is an overview and not intended to be an all-inclusive summary. As a general principle, patients must be monitored by the health care team after changes to therapy resulting from recommendations made by the antimicrobial stewardship team.

Intravenous to oral conversion (IV to PO) involves a policy or guideline for switching the route of administration after care or patient assessment.

Rationale

This strategy has numerous benefits for patients and results in lower health care costs, so it is highly encouraged. Still, studies have shown that antimicrobials with high bioavailability are given intravenously to patients who could tolerate oral intake nearly 50 per cent of the time.¹
Resources and tools

An antimicrobial stewardship program (ASP) is a set of “coordinated interventions designed to improve and measure the appropriate use of antimicrobial agents by promoting selection of the optimal antimicrobial drug regimen, including dosing, duration of therapy and route of administration.” Policy Statement on Antimicrobial Stewardship by SHEA, IDSA, PIDS. ICHE 2012; 33: 322-327

The effective use of antimicrobials is important for minimizing the unintended consequences of inappropriate use, controlling antibiotic-resistant organisms and reducing selection for *Clostridium difficile*. Below are links to resources, presentations and tools to assist institutions in developing and sustaining a successful ASP.

Posters

The following posters have been developed to promote appropriate prescribing in hospital settings. The posters can be downloaded, printed and placed in common areas to assist doctors, nurses and pharmacists.
ONE THING YOU CAN DO TODAY TO IMPROVE ANTIMICROBIAL USE

REVIEW ALL ANTIBIOTIC ORDERS WITHIN 72 HRS

Within 72 hours, review laboratory/diagnostic data and patient clinical status to assess:

A If the antimicrobial can be stopped (no evidence of infection)

B If the antimicrobial should be changed

C If an IV antimicrobial can be switched to oral

D The duration of therapy or next reassessment date

For more information regarding antimicrobial stewardship: Visit www.publichealthontario.ca/asp, or contact Public Health Ontario at asp@oahpp.ca.
Ontario Health Profile

Antimicrobial Resistance
A Public Health Threat
**ANTIMICROBIAL RESISTANCE**

**A PUBLIC HEALTH THREAT**

Antimicrobial resistance is an increasingly serious health issue in Ontario and worldwide. As more antimicrobial drugs become ineffective and fail to treat a growing number of infections, those infections persist and increase the risk of disease, poor health and death. Action is required to ensure the use of antimicrobials only when necessary to safeguard the availability of future treatments for both common and serious infections.

**History of antimicrobial resistance: example of Neisseria gonorrhoeae**

Continuing and growing antimicrobial resistance in Neisseria gonorrhoeae, the organism that causes gonorrhea, means that gonorrhea may soon become untreatable as no new drugs are in development. Of the many drugs used for decades to fight gonorrhea, only cephalosporins continue to be effective, and their efficacy has begun to wane. While over 20 antibiotic classes were marketed between 1930 and 1962, only two new classes have been approved for sale since that time. This example shows the history of antibiotics used to treat gonorrhea, and reflects increased resistance of many drugs to an increasing number of infections:

- **Penicillin** discovered 1928; resistant since 1984
- **Sulphonamides** discovered 1932; resistant since 1984
- **Tetracyclines** discovered 1944; resistant since 1965
- **Macrolides** discovered 1948; resistant since 1977
- **Quinolones** discovered 1966; resistant since 1994
- **Cephalosporins** discovered 1949; resistant since 2001

**THE ISSUE AT A GLANCE**

- Misuse and overuse of antimicrobials have increased the pathogens spread and rate of resistance.
- Patients with routine infections, such as urinary tract infections (UTIs), are at higher risk for serious complications when the microbe is drug-resistant.
- The need to preserve the effectiveness of established antibiotics is critical, as antibiotic discovery is costly, slow and ultimately uncertain.

**HOW ANTIMICROBIAL RESISTANCE OCCURS**

Resistance can exist naturally, happen through mutation, or happen by picking up resistant genes from other microbes. Microbes not killed by antimicrobials survive and multiply, leading to the emergence of strains that are partially or fully resistant to antimicrobial treatment.

**IMPLICATIONS OF ANTIMICROBIAL RESISTANCE**

As antimicrobial resistance increases, more currently treatable diseases will become untreatable, leading to increased infection, complications and death.

**ORGANISMS OF CONCERN**

Laboratory testing for resistance and whether or not it is increasing over time provides a warning that treatment may lose effectiveness. Many organisms, primarily acquired in community settings, are showing concerning levels of resistance to the antimicrobials routinely used to treat infection. Examples of these include:

- **Enterobacteriaceae** (amikacin resistance)
- **Resistant strains of Clostridium difficile** (vancomycin resistance)
- **Methicillin-resistant Staphylococcus aureus** (methicillin resistance)

**STopping antimicrobial resistance**

Addressing the growing threat of antimicrobial resistance will require shared and coordinated action.

**Public Health**

- Focus on the prevention of infections
- Surveillance to detect emergence of resistance

**Clinicians**

- Antimicrobial stewardship — prescribe antimicrobials only when required
- Use the right drug, at the right dose, for the right duration

**Researchers**

- Explore new antimicrobials and combination therapies
- Study ways to mitigate the development of resistance

**Public**

- Take antimicrobials as prescribed and only when necessary

**Industry**

- Minimize the use of antimicrobials for agricultural use

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Figure 1: Antimicrobial resistance in selected organisms, Ontario, 2010–2014

Select organism to include:
- [ ] Candida glabrata
- [ ] CPE
- [ ] Escherichia coli (urinary)
- [ ] Klebsiella pneumoniae (urinary)
- [ ] Neisseria gonorrhoeae
- [ ] Shigella

Select an organism to highlight:
- [ ] Candida glabrata
- [ ] CPE
- [ ] Escherichia coli (urinary)
- [ ] Klebsiella pneumoniae (urinary)
- [ ] Neisseria gonorrhoeae
- [ ] Shigella

Select a geography (Ontario or by public health unit):

Ontario
Regional Infection Control Networks (RICN)

Fourteen RICNs across Ontario assist healthcare providers in implementing best practices in Infection Prevention and Control. Our infection prevention and control experts support and facilitate local knowledge transfer, information sharing and learning and development with a range of services including:

- consultation on IPAC questions or issues
- resources and tools for various health care settings, including acute care, long-term care, retirement homes and clinics and offices
- education or information sharing sessions and professional development events to help practitioners continuously update and support their IPAC practice

For more information, email ricn@oahpp.ca or contact your local RICN office.

Central South Infection Control Network (CSICN)

250 Fennell Avenue West
Hamilton, ON L8N 3R5

Mailing Address:
P.O. Box 2100, Hamilton, ON L8N 3R5

Map
Tel: 289-975-9063
Toll-free: 1-866-681-4916
Fax: 905-385-0083 (New)
Email: csicn@oahpp.ca
Or

virginia.tirilis@oahpp.ca
289 975 9062

debbie.demizio@oahpp.ca
289 975 4534