

# Provincial Infection Control Network of British Columbia



## Annual Report

April 2010 – March 2011

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# Executive Summary

The Provincial Infection Control Network of British Columbia (PICNet) is a provincially supported professional collaborative that provides guidance and advice on healthcare-associated infection (HAI) prevention and control in British Columbia. Under the aegis and accountability framework of the Provincial Health Services Authority (PHSA), PICNet connects health care professionals from across the province to develop and create guidelines and tools, with a focus on surveillance, education and evidence-based practice. This is our Annual Report for 2010-2011, another highly productive year for the network. PICNet's accomplishments fall under the following four strategic directions:

## **Building Partnerships**

During 2010/2011 PICNet surveyed our community of practice (COP) to evaluate the services we provide and to obtain suggestions for future activities. In response to this we collaborated with several multidisciplinary groups to develop guidelines, toolkits and discussion papers and partnered with our colleagues in healthcare facilities across the lower mainland and Northern Health Authority during National Infection Control Week. PICNet also performed a province-wide gap analysis of Infection Control resources in Residential Care Facilities (RCF) in the province. PICNet is currently collaborating in a province-wide initiative to improve hand hygiene compliance among healthcare providers.

## **Improving Quality**

PICNet continues to collect data from the Health Authorities (HA) for the surveillance of *Clostridium difficile* Infections (CDI). Reporting mechanisms are continuously evaluated and improved in order to present data that is both accurate and useful. Participation agreements with the HAs have been expanded to allow for the addition of other HAIs and reporting of rates at the healthcare facility level. Implementation of the Methicillin Resistant *Staphylococcus aureus* (MRSA) module is currently underway. During the year, PICNet created guidelines for the management of Gastrointestinal Infection (GI) outbreaks and developed guidelines for the management of Healthcare Providers (HCP) pre- and post-exposure to measles and rubella. PICNet continues to solicit our COP for guideline development priorities. PICNet's guidelines for the management of Respiratory Infections (RI) were also evaluated by members of our COP and revised based on both current evidence and feedback received.

## **Promoting Best Practices**

An Education Steering Committee was established in August 2010. Toolkits for CDI and Carbapenem-resistant Gram-negative Bacilli (CRGNB) were created and posted to the PICNet website. PICNet is collaborating with several partners in the creation of other education projects including the BC Patient Safety and Quality Council, CHICA-Canada, the College of Registered Nurses of BC and the University of BC. PICNet provided access to 47 educational teleclasses during 2010/2011 and provided funding for 11 members of our COP to attend educational events. An educational conference was organized during April 2011 with approximately 160 delegates, presenters and exhibitors in attendance. PICNet's website is constantly updated and remains a key resource for our COP. A redesign of the website is

planned for 2011.

### **Responding to Issues**

PICNet formed adhoc working groups at the request of the Ministry of Health to address issues regarding the multi-use of CT contrast injector sets and the reprocessing of flexible endoscopes.

### **Acknowledgements**

PICNet would like to thank the members of our community of practice who participate in both our standing committees and our working groups. Members volunteer their time to attend meetings and contribute to PICNet's success. Without the hard work of these members PICNet would not be able to produce the volume and quality of work it does.

## **Priorities for 2011 – 2012**

### **Priority 1:**

To continue the expansion of our HAI Surveillance program to include MRSA and VRE.

### **Priority 2:**

To expand our educational tools to include online training for auditors and an orientation toolkit for new ICPs and a Residential Care Manual for non-affiliated facilities.

### **Priority 3:**

To develop recommendations for Infection Control Resource Teams as a provincial resource.

### **Priority 4:**

To update our guidelines for the management of Antibiotic Resistant Organisms.

# The Provincial Infection Control Network

The Provincial Infection Control Network (PICNet) is a provincially supported professional collaborative encompassing regional and provincial health organizations. PICNet was developed in 2005 by the BC Ministry of Health.

Our vision continues to be: *Good Science - Good Will.*

PICNet's mission is to maximize coordination and integration of activities related to healthcare-associated infection prevention, surveillance and control, for the entire province, using an evidence-based approach.

PICNet's network model emphasizes participation, collegiality, and trust. This model fosters and strengthens professional relationships, which enables the infection prevention and control community of practice (COP) to benefit from the knowledge and expertise of others across healthcare settings in BC. As a result, PICNet's initiatives and best practice guidelines are developed and owned by healthcare professionals in the province. The guidelines combine rigorous evidence-based standards with a hands-on knowledge to achieve the best possible results for infection prevention and control in healthcare settings.

Under the aegis and accountability framework of the Provincial Health Services Authority (PHSA), with the support of all Health Authorities in BC, PICNet is a collaborative of many healthcare disciplines working together to prevent and control healthcare-associated infections (HAI) across the continuum of care.

PICNet does this by:

- Supporting and coordinating initiatives of shared importance
- Providing knowledge to guide best practices
- Sharing information, translating knowledge and training experts
- Directing, coordinating and enhancing surveillance activities
- Advocating on behalf of all professionals working to prevent and control HAIs in BC
- Providing advice on relevant policy and issues.

PICNet's COP includes – but is not limited to – environmental health officers, epidemiologists, infection control professionals, infectious disease physicians, medical health officers, medical microbiologists, public health nurses and physicians, and occupational health nurses and physicians.

PICNet's work is focused in three areas: the coordination of province-wide surveillance of healthcare-associated infections, the creation of guidance documents for infection prevention and control best practice and providing educational tools and programs to our community of practice.

## **PICNet Co-Directors and Management Office**

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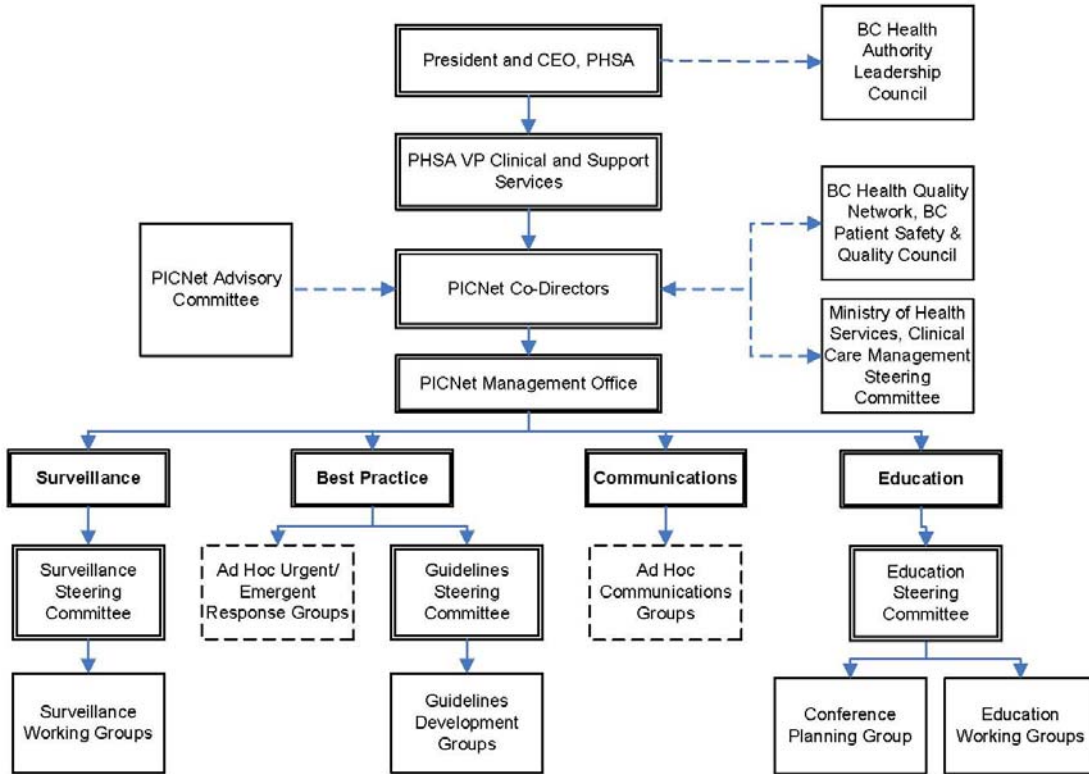
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# PICNet's Organizational Chart



## Acknowledgments

PICNet would like to thank the members of our community of practice who participate in both our standing committees and our working groups. Members volunteer their time to attend meetings and contribute to PICNet's success. Without the hard work of these members PICNet would not be able to produce the volume and quality of work it does.



# Standing Committee Reports

## 1. Advisory Committee

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Appointees to the PICNet Advisory Committee represent the six Health Authorities and several key organizations/specialities involved with the prevention and control of healthcare-associated infections. This allows for accountability and lines of communication between PICNet and the Health Authorities and represented organizations, and also helps clarify the roles and responsibilities of Committee members. At the same time, the Committee continues to represent all regions of British Columbia, and includes members with great expertise and experience in areas relevant to infection prevention and control. This expertise and experience includes not just specific professional expertise but also knowledge and experience in the varied physical and institutional environments across the province. This Committee's principle role is to provide PICNet with strategic direction for its work.

PICNet would like to acknowledge and thank each Health Authority, as well as the various professional organizations, for their support and contributions to the PICNet Advisory Committee, and all of PICNet's work. It is the collective expertise and commitment of our partners within these organizations that truly drives PICNet and it is with much appreciation that we recognize this.

### Members<sup>1</sup>

- *John Andruschak, VP Clinical and Support Service, Provincial Health Services Authority*
- *Joanne Archer, Education and Best Practices Coordinator, PICNet, Provincial Health Services Authority*
- Dr. George Astrakianakis, Associate Professor, School of Environmental Health, University of British Columbia
- Dr. William Bowie, Adult Infectious Diseases, Vancouver General Hospital, Vancouver Coastal Health
- Dr. Elizabeth Bryce, PICNet Co-Director, Regional Medical Director, Infection Control, Vancouver Coastal Health
- Dr. Sylvie Champagne President, BC Association of Medical Microbiologists
- Geoff Clark, Worksafe BC
- David Keen, Executive Director, Workplace Health, Fraser Health/Provincial Health Services Authority
- *Bruce Gamage, Network Manager, PICNet, Provincial Health Services Authority*
- *Brian Sagar, Director Patient Safety, Health Authorities Division, Ministry of Health*
- Janice de Heer, Corporate Director, Infection Prevention and Control, Interior Health Authority

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<sup>1</sup> Italicized members indicate non-voting status.

- Dr. Bonnie Henry (Chair), Physician Epidemiologist, BCCDC, Provincial Health Services Authority
- Jacquie Hlagi, Community and Hospital Infection Control Association, British Columbia
- Deanna Hembroff, Manager, Infection Prevention and Control, Northern Health
- Dr. Judy Isaac-Renton, PICNet Co-Director, Director of BCCDC Public Health Microbiology and Reference Laboratories, Provincial Health Services Authority Laboratories
- Dr. Larry Gustafson, Medical Health Officer, Fraser Health
- Dr. Pamela Kibsey, Medical Microbiologist/Infection Control, Vancouver Island Health Authority
- Dr. Ben Mack, Medical Microbiologist, Fraser Health
- Dr. Marc Romney, Medical Microbiologist/Infection Control, Providence Health Care
- Dr. Diane Roscoe, Head Medical Microbiology and Infection Control, Vancouver Coastal Health
- Dr. Eva Thomas, Corporate Director Infection Prevention and Control, Provincial Health Services Authority
- *Lucy Truong, Office and Communications Coordinator, PICNet, Provincial Health Services Authority*
- Dr. Annalee Yassi, Professor, College of Interdisciplinary Studies, University of British Columbia

## 2. Education Steering Committee

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The PICNet Education Steering Committee (ESC) was created in August 2010. The purpose of the ESC is to provide guidance to PICNet's educational projects and programs. The ESC provides advice on the development of tools and resources to support the education and professional development of members of our Community of Practice and assists in selecting the content and scope of PICNet's educational conferences. The ESC also assists in evaluation of PICNet educational projects and programs.

The PICNet ESC has been formed to assist the PMO with moving the above goals and objectives forward. Committee members are expected to represent their jurisdiction and/or professional discipline. PICNet would like to thank the Education Steering Committee for their hard work this year!

### Members

- Joanne Archer (Chair), PICNet
- Carolyn Bouchard, Northern Health Authority
- Jim Curtin, Providence Health Care
- Christine Franic, Vancouver Island Health Authority
- Shelley Franklin, BC Ambulance Service
- Catherine Guy, Northern Health Authority
- Toby Krell, Saint Joseph's Hospital
- Isobel McDonald, First Nations Intuit Health, Health Canada
- Colleen Reiswig, Interior Health Authority
- Cathryn Smith, Fraser Health Authority

### 3. Surveillance Steering Committee

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The purpose of the Surveillance Steering Committee (SSC) is to provide guidance to PICNet's HAI surveillance programs and to assist the PICNet Management Office (PMO) towards implementation of standardized surveillance practices among participating parties. This Committee also assists the PMO in processes related to provincial collection of summary data and reporting of trends over time.

The goals and objectives of this committee are to:

1. Assist in ongoing process evaluation of the PICNet surveillance processes and protocols.
2. Advise on development of web-based tools for data collection, storage, analysis and sharing.
3. Advise on the development of check-lists for each HA requirements to implement each surveillance module.
4. Assist with the implementation of standardized surveillance methodology and case definitions province-wide that conform to national initiatives.
5. Advise on the integration of laboratory surveillance through typing of a representative number of isolates and standardization of laboratory protocols (in collaboration with the BC Association of Medical Microbiologists (BCAMM)).

The PICNet SSC has been formed to assist the PMO with moving the above goals and objectives forward. PICNet would like to thank the Surveillance Steering Committee for their hard work this year!

#### Members

- Jun Chen Collet, Provincial Health Services Authority
- David Crawford, Interior Health Authority
- Tara Donovan, Fraser Health Authority
- Leslie Forrester, Vancouver Coastal Health
- *Bruce Gamage (Chair), PICNet*
- *Dr. Guanghong Han, PICNet*
- Deanna Hembroff, Northern Health
- Dr. Bonnie Henry, Provincial Health Services Authority
- Dr. Linda Hoang, Provincial Health Services Authority
- Anthony Leamon, Vancouver Island Health Authority
- Dr. Elisa Lloyd-Smith, Providence Health Care

## 4. Guidelines Steering Committee

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The purpose of this group is to ensure that PICNet guidelines use the most appropriate methodology and the best available research in their conception and development. The Guidelines Steering Committee (GSC) provides direction and assistance to Guideline Working Groups (GWG) by evaluating and determining the most appropriate use of research and existing guidelines.

Responsibilities of the GSC are to :

1. Review guideline proposals to identify priority guidelines for development
2. Review appraisals of existing guidelines by the PMO
3. Define the scope and purpose of guidelines for development
4. Participate in the initial steps of literature review and refine key questions
5. Membership selection for Guideline Working Groups
6. Review the progress of guidelines in development to ensure transparency and due diligence in use of evidence and the guideline development process
7. Review completed guidelines for appropriate use of evidence and the GWG responses to comments received from the Community of Practice during consultation.

### Members

- *Joanne Archer (Chair), PICNet*
- Dr. George Astrakianakis, University of British Columbia
- Dr. William Bowie, Vancouver Coastal Health
- Bev Dobbyn, Vancouver Island Health Authority
- Janice de Heer, Interior Health Authority
- Linda Kingsbury, Infection Control Consultant

## Education Update

PICNet undertook the following education activities during this fiscal year:

<b>Type</b>	<b>Description</b>	<b>Participation</b>
Infection Control Week	Hosted Education Booth at Hospitals around the Lower Mainland and Northern Health Authority	Healthcare providers within host hospitals
CHICA-Canada National Conference	Hosted Educational Booth at the CHICA-Canada National Conference	900 conference delegates
Online Educational Modules	Prevention of Surgical Site Infections	615 pageviews
	Basic Infection Control	4450 pageviews
	CVC Insertion	230 pageviews (11/2010 – 3/2011)
	CVC Care & Maintenance	906 pageviews
Teleclasses	Webber Training	130 Community of Practice Members
Website and Online Resources	Overall Website	1741 average monthly visits
	CDI Toolkit	1498 pageviews
	CRGNB Toolkit	399 pageviews (2/2011 – 3/2011)
	Hand Hygiene Resource Page	2065 pageviews
Education Resource Fund	Provided educational funding for members of our Community of Practice	11 Community of Practice Members

### ***CHICA-Canada National Education Conference***

Each year the members of the PICNet Management Team attend the CHICA-Canada National Education Conference. This allows us to attend the education sessions and also to share the work that we have been doing with our colleagues from across Canada. This year the National Conference was held in Vancouver. Bruce Gamage presented on the *C. difficile* surveillance system and the results of the Needs Assessment for Infection Control resources in Residential Care Facilities. Joanne Archer presented on the development of the online education module for the prevention of Surgical Site Infections.

The members of the PICNet Management Team also hosted an information booth in the exhibitor's hall in order to share the many resources available through PICNet with conference delegates.

### ***New Online Education Modules***

In 2010 PICNet made three new online infection prevention and control modules available on our web site. These modules include: the insertion of central venous catheters (CVC), care and maintenance of CVC and Protect Patti: Practicing Personal Protection. These modules are provided freely for anyone to participate in through the internet. The modules are interactive and provide graphical and video demonstrations of patient care for learning purposes. They are aimed towards healthcare providers involved in direct patient care. The CVC educational modules were created by Vancouver Coastal Health's Educational Technologies Department and Protect Patti was created by the University of BC in collaboration with the World Health Organization and the Pan-American Health Organization.

PICNet has received requests to provide access to education modules on our website for the purpose of loading them on hospital education systems from Ontario, the Yukon and Saudi Arabia.

### ***PICNet Website***

The PICNet website remains an important communication and education tool for the infection prevention and control community of practice and the public at large. The site includes standards and guidelines, education tools and surveillance reports as well as many links to websites on the Internet, which may be useful for educators and infection control prevention and control programs. From April 2010 to March 2011 the web site received 20,902 visits, an average of 1741 visits per month. The most popular pages include the Practice Guidelines and Education and Training pages. The most accessed resources include the Hand Hygiene Resource Page, CDI Toolkit, and Webber Training.

### ***PICNet's Education Resource Fund***

Consistent with its role in supporting infection prevention and control education and training, PICNet has established an "Education Resource Fund". The purpose of this fund is to provide educational grants to members of PICNet's Community of Practice (COP), consisting of all healthcare professionals in the province involved in infection prevention and control. Members of PICNet's COP may apply annually to support their attendance at a conference, meeting or other educational activity. The amount awarded to any individual

applicant is determined by a selection committee made up of three members of the PICNet Advisory Committee.

Recipients of Educational Funding this year were:

<b>Recipient</b>	<b>Health Authority</b>	<b>Event Attended</b>
Joanne Baines	Vancouver Island Health Authority	CHICA Conference
Nancy Galwetz	Interior Health Authority	CHICA Conference
Debra Foster	Northern Health Authority	PICNet Educational Conference
Debora Giese	Northern Health Authority	CHICA Conference
Nicki Gill	Interior Health Authority	CHICA Conference
Suzanne Hyderman	Good Samaritan Society	CHICA Conference
Mariko Matsumoto	Vancouver Island Health Authority	CHICA Conference
Beth McAskill	Northern Health Authority	CHICA Conference
Bonnie Schurak	Northern Health Authority	CHICA Conference
Joanne Tench	Interior Health Authority	CHICA Conference
Kim Zboyovsky	Vancouver Island Health Authority	CHICA Conference



## Projects & Initiatives

### Gastrointestinal Infection Outbreak Guidelines for Healthcare Facilities

**Description:** This reference document is intended to provide information and guidance for all healthcare facilities when developing or updating their policies and processes that pertain to prevention, surveillance for, identification and control of GI infection outbreaks. This document will enable policy or protocol development to be more straightforward, timely and require less resources. Effective outbreak management requires a collaborative effort between Public Health, Infection Prevention and Control, Laboratory Services, Workplace Health and Safety, facility Managers and facility HCPs.

**Status:** This document was completed in July 2010 and posted to the PICNet website and published in the Provincial Communicable Disease Control Manual.

**Participants:** Joanne Archer, PICNet (Writer)  
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Bruce Gamage, PICNet  
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Nicki Gill, Interior Health Authority  
Dr. Larry Gustafson, Fraser Health Authority  
Deanna Hembroff, Northern Health Authority  
Marney Hunt, Provincial Health Services Authority  
Jessica Ip, Vancouver Coastal Health Authority  
Beverly McCarthy, Vancouver Coastal Health Authority  
Craig Nowakowski, Vancouver Island Health Authority  
Parmjeet Panesar, Fraser Health Authority  
Cathy Smith, Fraser Health Authority  
Marsha Taylor, Epidemiology Services, BCCDC  
Greg Tone, Northern Health Authority  
Julie Wong, Public Health Microbiology and Reference Laboratory, BCCDC

**Organizational Impact:** The development of this guideline has been a collaborative effort between Public Health, Occupational Health and Infection Prevention and Control Professionals from all jurisdictions in BC. The guideline provides clear direction for the management of gastrointestinal outbreaks in healthcare settings and will be a useful tool for facilities province-wide when updating their existing protocols.

## **Guidelines for Baseline Assessment and Management of Healthcare Provider (HCP) Cases or Contacts of Measles (Rubeola) or Rubella**

**Description:** In 2010, an outbreak of measles occurred in the province of British Columbia (BC). The virus was probably brought to BC by travelers visiting the province during late February or early March; two different genotypes have been identified in samples collected during the outbreak. Cases were initially diagnosed in the Lower Mainland, among individuals who were un/under immunized. The outbreak spread to all five geographic Health Authorities and as of June 20, 2010 there have been 80 confirmed cases. Fifty one (60%) of cases have presented to an Emergency Department and 17 (20%) have been admitted to hospital. One case required admission to the Intensive Care Unit (ICU). The protection of healthcare workers (HCW) who have been exposed or who may be exposed to cases has become a significant issue. Documentation of their measles immunity status is missing for many HCWs and there is variation in the approaches taken by the Health Authorities to assess and provide pre- and post-exposure protection of HCWs. The Vaccine Preventable Diseases Working Group was tasked with developing guidelines and recommendations for adequate protection against measles and rubella management of HCW who have been exposed to cases.

**Status:** The measles section of the document was completed and posted to the PICNet website in June 2010. A comprehensive document addressing measles, mumps and rubella will be posted during the summer of 2011.

**Participants:** Joanne Archer, PICNet (Writer)  
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Catherine Guy, Northern Health Authority  
Deborah Harden, Vancouver Coastal Health Authority  
Dr. Bonnie Henry, BCCDC  
Dr. Ben Mack, Fraser Health Authority  
Linda Miller, Interior Health Authority  
Dr. Monika Naus, BCCDC  
Dr. Martin Petric, BCCDC  
Elayne Preston, Fraser Health Authority  
Cathryn Smith, Fraser Health Authority

**Organizational Impact:** This project was a collaborative effort between Public Health, Occupational Health and Infection Prevention and Control Professionals from all jurisdictions in BC. The guidelines provide clear direction for the management of healthcare workers exposed to cases of measles through their work and the community. Given the outbreak of measles that occurred during its development, this document proved to be a valuable tool.

## ***Clostridium difficile* Infection (CDI) Toolkit**

**Description:** Several tools and resources were selected by a group of Infection Control Professionals. They provide examples of tools used in the management of *Clostridium difficile* Infection (CDI). Most documents can be customized to meet the needs of various organizations. The toolkit includes resources for:

- Patient & Staff Education
- Checklists & Audit Tools
- Care Plans & Processes

**Status:** This project was completed and the various tools and resources were posted to the PICNet website in July of 2010.

**Participants:** Linda Adam, Vancouver Coastal Health  
Joanne Archer, PICNet (Writer)  
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Christine Franic, Vancouver Island Health Authority  
Holly-Lynn Nelson, Northern Health Authority  
Lucy Truong, PICNet

**Organizational Impact:** These tools and resources provide examples of tools used in the management of *Clostridium difficile* Infection (CDI). They can be adopted or adapted by healthcare facilities for use in preventing and managing outbreaks of CDI.

## Carbapenem-resistant Gram-negative Bacilli (CRGNB) Toolkit

**Description:** Carbapenem resistant gram-negative bacteria (CRGNB) have been surfacing in many places in the world with a few cases identified in Canada. In order to assist acute care facilities in addressing this emerging organism, an adhoc group of experts created a toolkit for use by acute care sites. This toolkit will be updated on a regular basis as more information becomes known about the transmission and potential impact. The toolkit includes:

- CRGNB Protocol
- Fact Sheets for Staff
- Fact Sheets for Patients

**Status:** This project was completed and the various tools and resources were posted to the PICNet website in February 2011.

**Participants:** Dr. Elizabeth Bryce, Vancouver Coastal Health Authority  
Joanne Archer, PICNet (Writer)  
Mary Cameron-Lane, Vancouver Coastal Health Authority  
Meg Miller, Interior Health Authority  
Lucy Truong, PICNet

**Organizational Impact:** These tools and resources provide examples of tools used in the management of Carbapenem Resistant Gram Negative Bacilli (CRGNB). They can be adopted or adapted by healthcare facilities for use in preventing and managing outbreaks of CRGNB.

## Identifying Gaps in Infection Prevention and Control Resources for Residential Care Facilities in British Columbia

**Description:** Residential and rehabilitative care facilities (RCF) represent an important aspect of health services bridging the community and acute care. Infection prevention control (IPC) in RCFs has not been paid the same degree of attention as in acute care facilities, despite general agreement that infections represent a significant source of morbidity and mortality for the RCF residents.

The first step in ensuring that we are providing safe, high quality care to all BC Residential Care residents is to gain a clear understanding of the differences in IPC structures and processes used between regions and under the various care models. This information can then be used to identify the strengths and gaps in our current model of RCF infection prevention and control so that a more effective and standardized model can be established across the province.

**Status:** The results of this survey were published to the PICNet website in July of 2010. An article has also been accepted for publication in the American Journal of Infection Control.

**Participants:** Joanne Archer, PICNet  
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Louise Holmes, Provincial Health Services Authority  
Suzanne Hyderman, Good Samaritan Society  
Shannon Johnson, Dufferin Care Centre  
Angela Long, Vancouver Coastal Health Authority  
Avril Macdonald, Fraserview Care Lodge  
Cathy Munford, Vancouver Island Health Authority  
Wanda Murphy, Yaletown House Society  
Andrea Neil, Interior Health Authority  
Holly-Lynn Nelson, Northern Health Authority  
Jackie Ratzlaff, Vancouver Coastal Health Authority  
Valerie Schall, Douglas College  
Rashpal Toor, Vancouver Coastal Health Authority  
Dawn Vallee, Capilano Care Centre  
Kathy Wong, Vancouver Coastal Health Authority  
Lorraine Wentland, Yaletown House Society  
Lisa Young, Vancouver Island Health Authority

**Organizational Impact:** Our findings show that many RCF lack the necessary resources to provide quality infection control programs. Although many of the facilities had established IPC policies and external partnerships to assist them with IPC issues that arise, most lacked the leadership and administrative support required to sustain an effective, high quality IPC program.

## Respiratory Infection Outbreak Guidelines for Healthcare Facilities

**Description:** The 2007 Respiratory Infection (RI) Outbreak Guidelines for Healthcare Facilities were reviewed and revised to reflect current best practices. These guidelines describe the infection prevention and control practices for respiratory infections that are primarily droplet spread. Implementing these guidelines will enable the healthcare system to detect and contain clusters and outbreaks of common respiratory infections and assist in the detection of novel pathogens.

These guidelines are not intended to replace local or regional processes, but rather to serve as a reference for all healthcare settings when developing or updating their own policies. The recommendations described in this document exemplify best practices in the prevention and control of seasonal droplet-spread respiratory outbreaks.

**Status:** The revision of this document was completed in February 2011 and posted to the PICNet website and published in the Provincial Communicable Disease Control Manual.

**Participants:** Joanne Archer, PICNet (Writer)  
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Dr. Larry Gustafson, Fraser Health Authority  
Dr. Martin Petric, BC Centre for Disease Control  
Monica Sephton, Northern Health Authority  
Dr. Danuta Skowronski, BC Centre for Disease Control  
Joanne Tench, Interior Health Authority

**Organizational Impact:** The revision of this guideline has been a collaborative effort between Public Health, Occupational Health and Infection Prevention and Control Professionals from all jurisdictions in BC. The guidelines provide clear direction for the management of respiratory outbreaks in healthcare settings and will be a useful tool for facilities province-wide when updating their existing protocols.

## Healthcare-Associated Infections (HAI) Surveillance

**Description:** In the fall of 2005, an ad hoc Working Group was formed to address surveillance of CDI in BC. The Working Group, in collaboration with the BC Association of Medical Microbiologists (BCAMM), developed the surveillance protocol for CDI for acute care facilities in BC.

During the fall of 2009 PICNet Surveillance Steering Committee worked to develop a set of standard case definition and a minimal data set to be used for the surveillance of Methicillin resistant *Staphylococcus aureus* (MRSA).

The Goals of the MRSA Surveillance System are to:

- determine the incidence and trend of healthcare-associated MRSA in BC acute care facilities
- determine the epidemiological characteristics of MRSA incidence in BC

**Status:** In June 2009 the system went live as the Health Authorities began uploading data into the PICNet database. By December 2009 PICNet had received data on healthcare-associated CDI cases from all six participating Health Authorities and four affiliated facilities.

Surveillance reports for fiscal years 2008/2009 (April 1, 2008 to March 31, 2009) and 2009/2010 (April 1, 2009 to March 31, 2010) and the first two fiscal quarters of 2010/2011 (April 1, 2010 to September 16, 2010) are published to the PICNet website ([www.picnetbc.ca](http://www.picnetbc.ca)).

PICNet continues to receive data submissions from all Health Authorities in BC. CDI surveillance updates will be published semi-annually.

A second module has been added to the existing CDI surveillance system to allow the participating Health Authorities to upload the minimal data set for MRSA. PICNet's Surveillance Epidemiologist will be working with our HA partners, the system is projected to go-live in the summer of 2011.

**Participants:** All Health Authorities and four affiliated healthcare facilities in BC.

**Organizational Impact:** PICNet's HAI Surveillance Reports are used by the Ministry of Health to develop performance measures. Healthcare facilities within each Health Authority can use the reports to benchmark their rates and focus prevention and control efforts where higher rates have been identified.

## **An Evaluation of Multi-Use Contrast Media Injector Sets and Vials for Computerized Tomography in BC Hospitals**

**Description:** The growing concern over the past few years about nosocomial infection prevention highlights the importance of patient safety for healthcare institutions. Questions have been raised concerning the safety of the technique used for intravenous injection of contrast medium during computerized tomography (CT) in Medical Imaging Departments in BC hospitals.

According to current practice in the majority of BC hospitals, a single container of contrast medium, set up on an injection system, is used for consecutive intravenous injections in multiple patients. As a result, medical devices designated as single use are shared by several patients.

To explore the potential risk of this practice to patients' safety, PICNet was asked to form an ad hoc working group to review this practice and provide recommendations to the Ministry of Health Services.

**Status:** A discussion paper was completed and forwarded to the Ministry of Health for presentation to the Health Operations Committee. The paper was also shared with the members of the PICNet Advisory Committee.

**Participants:** Dr. Elizabeth Bryce (Chair), Bruce Gamage, Joanne Archer (PICNet)  
Penny Brawn, Deanna Hembroff, Ruby Fraser (Northern Health)  
Sandra Daniels (Fraser Health)  
Judy Dyer, Bobby Tanaka, Connie Reid, Laurie Buist (Interior Health)  
Bruce Hartnett, Darren Kopetsky, Allison Lamsdale, Janet Bristeir (Vancouver Coastal Health)  
Viola Tang (Provincial Health Services Authority)  
Dianne Trudeau, Mary McNaughton (Providence Healthcare)  
Jeffrey Stevens, Fern Christensen, Graham Sanderson (Vancouver Island Health Authority)  
Brian Sagar, Claire Nishimura (Ministry of Health Services)

**Organizational Impact:** The ad hoc working group recommended that Medical Imaging Department in BC Hospitals, who are currently administering contrast medium using multidose or single-dose containers for multiple patients using a common injection system (syringe and tubing) with automatic injectors, continue this practice. It is recognized that instituting an immediate change in practice to single use injector systems would lead to reduced access to CT procedures for BC residents, and a significant increase in cost to the Health Authorities. Further to the above recommendation, Medical Imaging Departments in BC Hospitals are encouraged to move toward a change in practice to single use of equipment for intravenous administration of contrast medium. The goal of moving to single use injector systems is to further reduce the risk of infections and improve patient safety.



## Reprocessing Flexible Endoscopes, Bronchoscopes and Cystoscopes in BC Healthcare Settings

**Description:** Performing flexible endoscopic procedures has become a common practice in many physicians' offices and outpatient settings in British Columbia (BC). It is important to acknowledge that flexible endoscopes are complex instruments that require reprocessing between patients.

Conflicting views exist regarding the best practice for reprocessing flexible endoscopes, particularly cystoscopes, in physicians' offices and outpatient settings. PICNet has been asked by the Ministry of Health (MOH) to convene an expert working group to address this issue. A discussion document will be created to address these varying points of view, with the goal of moving towards best practice that will minimize potential risk to patients and mitigate the risk of decreasing access to endoscopic procedures to patients in BC.

**Status:** A multidisciplinary working group has been established and is comprised of representatives from Infection Prevention and Control, Medical Device Reprocessing, Risk Management, Urologists, the College of Physicians and Surgeons and the Ministry of Health. Representation was invited from all six Health Authorities.

**Participants:** Dr. Elizabeth Bryce (Chair), Bruce Gamage (PICNet)  
Bonnie Best (Fraser Health)  
Janice de Heer (Interior Health)  
Viola Tang, Robyn Hunter (Provincial Health Services Authority)  
Dianne Trudeau (Providence Healthcare)  
Penny Brawn, Deanna Hembroff (Northern Health)  
Darren Kopetsky, Dr. Aleksandra Stefanovic, Dr. Mark Nigro (Vancouver Coastal Health)  
Fern Christensen, Shelley Davies (Vancouver Island Health Authority)  
Dr. Elliot Phillips, Pat Fawcus (College of Physicians and Surgeons of BC)  
Andrew Wray (BC Patient Safety and Quality Council)  
Brian Sagar, Catherine Marrie (Ministry of Health)

**Organizational Impact:** The ad hoc working group will make recommendations regarding the best practices for the reprocessing of flexible endoscopes in BC Healthcare settings. A change in practice may require alternate service delivery options to maintain service volumes for British Columbians requiring these procedures.

## Terminology & Abbreviations

**Contrast Medium:** Radiopaque substance taken orally, injected intravenously or injected intraarterially and used during certain radiology examinations to differentiate anatomical structures in the images of various tissues and organs.

***Clostridium difficile* Infection (CDI):** *C. difficile* is a bacterium that produces a toxin that can cause diarrhea and serious illness of the bowel. Generally, *C. difficile* does not cause problems in healthy people; however, CDI can be serious in people who are sick, elderly, or have weakened immune systems. In rare cases it can be fatal.

**Computerized Tomography (CT):** Computerized tomography is a medical imaging technique in which the patient is scanned with an x-ray beam.

**Flexible Endoscope:** Fiberoptic or video endoscopes used in the examination of the hollow viscera. These endoscopes generally invade only semicritical spaces, although some of their components might enter tissues or other critical spaces. Examples of endoscopes are laryngoscopes, nasopharyngeal endoscopes, transesophageal probes, bronchoscopes, colonoscopes, cystoscopes, gastroscopes, duodenoscopes, sigmoidoscopes and enteroscopes.

**Hand Hygiene:** Preventing the spread of illness through washing hands with soap and water or cleaning hands with alcohol based hand-rubs.

**Healthcare Associated Infections (HAI) (*Nosocomial Infections*):** Infections patients acquire through exposure to healthcare, which include pathogens from other patients, the environment, or staff. The pathogens may cause illness in patients during or after their stay.

**Methicillin-resistant *Staphylococcus aureus* (MRSA):** *Staphylococcus aureus* is a bacterium that is normally found on the skin and in the nose of healthy people. Some bacteria have become resistant to the medicines used to treat infections (antibiotics). MRSA is a type of *Staphylococcus aureus* that is resistant to most antibiotics, including the antibiotic called penicillin. *Staphylococcus aureus* can cause minor skin infections such as boils, or infections in a surgical incision site.

**Reprocessing:** The steps performed to prepare used medical equipment/devices for use (e.g. cleaning, disinfection and sterilization).

**Surgical Site Infection (SSI):** An infection at the site of an operative procedure occurring within 30 days of the procedure or within 1 year if an implant is in place and the infection appears to be related to the operative procedure. SSIs are classified as superficial, deep or organ space depending on the tissue involved.

**Vancomycin-Resistant *Enterococci* (VRE):** *Enterococci* are bacteria that are commonly found in the stomach and bowels of healthy people. Some bacteria have become resistant to the medicines used to treat infections (antibiotics). Vancomycin is an antibiotic used to treat serious infections. VRE is a type of *Enterococci* that has become resistant to Vancomycin. These bacteria rarely cause illness in healthy people. However, when VRE gets into open cuts and skin sores, they can cause infections. Occasionally, VRE can also cause more serious infections of the blood or other body tissues.

# Appendices

## Objectives/Deliverables Table

The following objectives were identified in PICNet's Strategic Plan:

Strategic Direction #1 – Building Partnerships			
Goal	Objectives	Actions	Milestones
PICNet will proactively develop new ways of relating and optimizing our collaboration with our partners in Occupational Health, Public Health and Quality and Patient Safety	Increase awareness about PICNet opportunities and initiatives among healthcare providers	<ul style="list-style-type: none"> <li>Identify opportunities to showcase PICNet's work in healthcare facilities and IPC related events</li> <li>Conduct regular COP surveys to identify areas for improvement and areas of need</li> </ul>	<ul style="list-style-type: none"> <li>PICNet participated in IC Week activities in facilities in the lower mainland and NHA</li> <li>During April 2010 PICNet surveyed our COP to evaluate the services we provide and receive suggestions for future activities</li> </ul>
	Collaborate with healthcare organizations and groups across the continuum of care on IPC issues.	<ul style="list-style-type: none"> <li>Work with representatives from the Health Authorities, Public Health, Occupational Health &amp; Safety, Residential Care, the Ministry of Health, Patient Safety and Quality, Worksafe BC, community care and other related IPC speciality areas focusing on guideline development and support for implementation as needed.</li> </ul>	<ul style="list-style-type: none"> <li>PICNet collaborated with several multidisciplinary groups to develop guidelines, toolkits and discussion papers.</li> </ul>
	Engage in innovative IPC-related research and practical projects that contribute to the advancement of IPC knowledge and practice.	<ul style="list-style-type: none"> <li>Identify IPC-related research and practical projects that will contribute to IPC knowledge and practices</li> <li>Invite members of our COP and key partners</li> </ul>	<ul style="list-style-type: none"> <li>PICNet performed a needs and gaps analysis of IC resources in RCF in the province.</li> <li>PICNet is collaborating in a</li> </ul>

		to participate in the IPC research and practical projects.	province-wide initiative to improve hand hygiene compliance among healthcare providers
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<b>Strategic Direction #2 – Improving Quality</b>			
<b>Goal</b>	<b>Objectives</b>	<b>Actions</b>	<b>Milestones</b>
PICNet will expand the province wide capacity for surveillance of HAI, develop tools and resources for our COP and develop evidence-based guidelines essential to improving services for patients.	Lead the improvement, expansion, implementation, and evaluation of the provincial HAI surveillance program on behalf of all BC healthcare facilities.	<ul style="list-style-type: none"> <li>Continue to collect, analyse, interpret and report HAI surveillance data in collaboration with the Health Authorities and the MOHS.</li> <li>Using continuous quality improvement principles evaluate and keep improving the existing HAI surveillance program infrastructure.</li> <li>Build on existing Participation Agreements between the Health Authorities and PICNet to include other HAIs, as needed.</li> <li>Incrementally expand the existing surveillance program to include other important HAIs [Methicillin Resistant Staphylococcus aureus (MRSA), Vancomycin Resistant Enterococci (VRE), Surgical Site Infections (SSI) and Blood Stream Infections (BSI) as resources permit.</li> </ul>	<ul style="list-style-type: none"> <li>PICNet continues to collect data from the HA on CDI infections.</li> <li>Reporting mechanisms are continuously evaluated and improved in order to present data that is both accurate and useful.</li> <li>Participation agreements with the HA were expanded to allow for the addition of further HAIs and reporting of rates the healthcare facility level.</li> <li>Implementation of the MRSA module is underway.</li> </ul>
	Develop further provincial best practice guidelines for IPC using our defined collaborative, multidisciplinary, evidence-based, iterative approach.	<ul style="list-style-type: none"> <li>Continue to develop best practice guidelines for the prevention and control HAI in collaboration with our COP.</li> <li>Continue to engage our COP soliciting needs to develop and prioritize best practice guidelines using the PICNet guideline development process.</li> <li>Evaluate and update existing provincial best practice guidelines to ensure they are current and based on the most recent evidence.</li> </ul>	<ul style="list-style-type: none"> <li>PICNet created guidelines for the management of GI outbreaks and developed guidelines for the management of HCP exposed to mumps, measles and rubella.</li> <li>PICNet continues to solicit our COP for priorities for guideline development.</li> </ul>

			<ul style="list-style-type: none"> <li>PICNet’s guidelines for the management of RI were evaluated by members of our COP and revised based on that evaluation.</li> </ul>
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**Strategic Direction #3 – Promoting Best Practices**

<b>Goal</b>	<b>Objectives</b>	<b>Actions</b>	<b>Milestones</b>
PICNet will actively promote the implementation of best practices through communication strategies, developing resources and tools, and providing access to educational opportunities.	Develop and deliver educational programs and resources promoting evidence-based best practices	<ul style="list-style-type: none"> <li>Create a standing education steering committee to address the educational needs of our COP related to HAI prevention and control</li> <li>Continue to develop online educational modules, operational tools, checklists and other resources to support infection prevention and control COP</li> <li>Organize and facilitate annual PICNet educational conferences, bringing key leaders and educators together to share their knowledge and expertise</li> </ul>	<ul style="list-style-type: none"> <li>In August 2010 a standing education steering committee was created.</li> <li>Toolkits for CDI and CRGNB were created and posted to the PICNet website.</li> <li>An educational conference was organized for April 2011. 160 delegates, presenters and exhibitors attended.</li> </ul>
	Assess the educational needs of the BC’s infection prevention and control COP, working collaboratively with key stakeholders across the continuum of care.	<ul style="list-style-type: none"> <li>Enhance infection prevention and control-related knowledge transfer by linking with partners (e.g. BCPSQC) on relevant educational projects.</li> </ul>	<ul style="list-style-type: none"> <li>PICNet is collaborating with several partners in the creation of education projects including BSPSQC, CHICA-Canada, College of Registered Nurses of BC and the University of BC.</li> </ul>
	Develop and improve access to infection prevention and control educational resources for PICNet’s COP.	<ul style="list-style-type: none"> <li>Ensure the ongoing development, enhancement and review of PICNet’s website as a vehicle for communication and education <ul style="list-style-type: none"> <li>Continue to provide ongoing access to educational teleclasses</li> <li>Provide funding opportunities for members</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>PICNet’s website is constantly updated and remains a key resource for our COP. A redesign of the website is planned for 2011.</li> <li>PICNet provided access to 47 teleclasses during</li> </ul>

		of the BC IPC COP to attend relevant educational events.	2010/2011. <ul style="list-style-type: none"> <li>Funding was provided for 11 members of our COP to attend educational events.</li> </ul>
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<b>Strategic Direction #4 – Responding to Issues</b>			
<b>Goal</b>	<b>Objectives</b>	<b>Actions</b>	<b>Milestones</b>
PICNet will respond to emerging health issues in a timely manner.	Respond to urgent/emergent IPAC issues, as appropriate, with PICNet's COP.	<ul style="list-style-type: none"> <li>Form ad hoc working groups as necessary to address urgent/emergent infection control issues using experts from our COP.</li> </ul>	<ul style="list-style-type: none"> <li>PICNet formed adhoc working groups to address the multi-use of CT contrast injector sets and the reprocessing of flexible endoscopes.</li> </ul>