



**Infection Prevention & Control
Annual Report**

2008 - 2009

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Executive Summary

The safety of patients, staff, physicians and visitors is of paramount importance to Interior Health. A key element of our safety culture is the prevention and control of infections. We are striving to implement a full program of infection prevention & control measures including Accreditation Canada's Required Organization Practices. The Infection Prevention & Control program became a corporate Interior Health program in November 2008, under the administration of Planning & Improvement. In this report are the accomplishments of Infection Prevention and Control with a look ahead to the coming year. Also included is some statistical analysis and information on what is being done to help prevent infections across the continuum of care. We welcome your feedback and comments on both this report and our current infection prevention & control activities.

The overarching goal of Infection Prevention and Control is to prevent infections from occurring in patients, residents, clients, visitors, physicians and employees. If, for whatever reason, an individual with an infection is in a facility or program, the goal of Infection Prevention and Control is to prevent the infectious agent from spreading to others.

Key improvements to monitoring of infection prevention & control practices and improving safety for patients/residents/clients have been made. It is our intention to do everything possible to reduce the risk of infections.

Infection Control Team Members

The infection prevention and control team is responsible for the day-today management of infection prevention and control practices and includes:

J. de Heer Corporate Director, Infection Prevention & Control

Infection Prevention & Control Practitioners from each Health Services Area (Most of the Practitioners remain in the Acute Care setting and have responsibilities to Residential Services and possibly Home and Community Care in their geographic areas) :

- Thompson/Cariboo/Shuswap
 - D. Cosgrove-Swan 250-314-2693
 - K. Leslie 250-554-2323 local 2530
 - Coleen Reiswig 250-833-3636 local 2259
- Okanagan North
 - J. Pyett 250-503-3704
 - E. Lavoie 250-558-1376
- Okanagan Central
 - W. Lutz 250-862-4314
 - M. Miller 250-862-4474
 - M. Blackburn 250-712-6981
 - A. Neil 250-712-6966
 - N. Gill 250-712-6971
- Okanagan South
 - B. Duncan 250-492-4000 local 2325
 - L. Schwartz 250-492-4000 local 2324

- Kootenay Boundary
 - E. Nicol 250-354-2375
 - J. Tench 250-368-3311 local 2354
- East Kootenay
 - L. Lehman 250-489-6421
 - N. Gawletz 250-417-6177

Professional Development

The Infection Prevention and Control program is committed to preparing the novice Infection Prevention & Control Practitioner to write the certification for infection control exam as well as assist existing practitioners in remaining current with the most up to date guidelines/policies/information. All Infection Prevention & Control Practitioners in Interior Health are expected to have their Certification in Infection Control (CIC). A new Infection Prevention & Control Practitioner must obtain their Certification in Infection Control following two years of practice in Infection Prevention and Control. To meet this commitment there have been, and will continue to be, ongoing education opportunities presented by the Interior Health Infection Control Leader and Educator. Three new practitioners attained their CIC this past year.

Infection Prevention & Control Practitioners are given the opportunity to attend national conferences. Several Infection Prevention & Control Practitioners took advantage of this opportunity. The information obtained at these conferences is shared at the monthly Infection Prevention & Control meeting.

Interior Health Infection Prevention & Control Practitioners are encouraged to participate in the Provincial Infection Control Network (PICNet). Interior Health is represented on all PICNet's working groups.

As staff should be familiar with the elements of their organization's infection prevention and control program the Infection Prevention & Control Practitioners provide ongoing staff education to the facilities they are responsible for. This education is done to reinforce current best practices and introduce new emerging information.

A temporary Educator position was created for the purpose of developing an orientation/training program for new staff hired into the position with no previous infection prevention & control experience. The orientation/training consists of eight learning modules. The modules are set up with self learning materials plus classroom and/or on site training. Three novice practitioners completed the first level of the orientation program. The second level is provided through Live Learning sessions, telephone support and on site mentoring whenever possible.

- **Module 1 – Program Overview & Administration** which includes: Interior Health overview, mandate of the Infection Prevention & Control program, role of an Infection Control Practitioner, Interior Health Infection Prevention & Control overview, local Infection Prevention & Control program overview including information on local manager, program supports, office, computer access, contact information, etc.
- **Module 2 – Infection Control Practices** - routine practices and additional precautions across the continuum of care, tour of local work site including patient/resident care areas, housekeeping, food services, diagnostics (medical imaging, lab), and pharmacy.
- **Module 3 – Microbiology & Infectious Diseases** – terminology, review normal flora, review specimen collection and results, review gram positive and negative cocci, review gram positive and negative bacilli, review viruses and Creutzfeldt-Jakob disease, and observational time in microbiology laboratory (on site or at a tertiary centre).
- **Module 4 – Epidemiology & Surveillance** - Chain of Infection, surveillance practices including where to get data and manage data systematically, acute Hospital Associated Infections including data collection tool and reference (National Healthcare Safety Network PowerPoint used as teaching tool), Residential Hospital Associated Infections

including data collection tool and reference (if residential is primary focus, Community Hospital Associated Infections data collection tool and reference, learn how to put Alerts into Meditech, learn about Infection Control Queries in Meditech.

- **Module 5 – Public Health, WH&S, Outbreak Management** - reportable communicable diseases, review principles of outbreak management, review Communicable Disease Unit's role (located in Vernon), review Gastrointestinal Outbreak management, review Influenza Like Illness outbreak management, review influenza vaccine initiatives for patients, residents, community clients and staff, occupational exposure to blood/body protocols, occupational exposure to communicable disease protocols.
- **Module 6 –Cleaning, Disinfection & Sterilization** - cleaning, disinfection and sterilization process, single use devices and reusable devices, recall process and medical device alerts, product selection, evaluation, distribution, transport and storage, tour Sterile Processing Department at local site and observe processes.
- **Module 7 – The Environment, Facility Planning & Construction** - review Canadian Standards Association standards, review Infection Prevention & Control Manual information and process for consultation.
- **Module 8 - Education, Consultation & Teaching Others** - participate in regional and local orientation and review PowerPoint on website, weekly Webber training opportunities, development of computer skills for teaching.

The creation of this position also allowed the IP&C program to move forward with the development of additional Health Care Associated Infection surveillance processes and new/revised policies for the Infection Prevention & Control Manual.

Education sessions were provided to the Infection Prevention & Control Practitioners on the use of the QME software program and surveillance processes.

Monitoring Practices

Ongoing audits of acute and residential care facilities to ensure appropriate infection prevention and control practices are being implemented continue.

Kelowna General Hospital (Kelowna B.C., Canada) and the corporate Infection Prevention & Control office collaborated on a surgical site infection pilot project with Vancouver Coastal Health Authority (Vancouver, B.C. Canada). The key objectives were to:

- a) examine the feasibility developing standardized surveillance methodology across Health Authorities (HAs) and
- b) expand the current traditional surveillance to include patient survey phone calls and voluntary physician reporting.

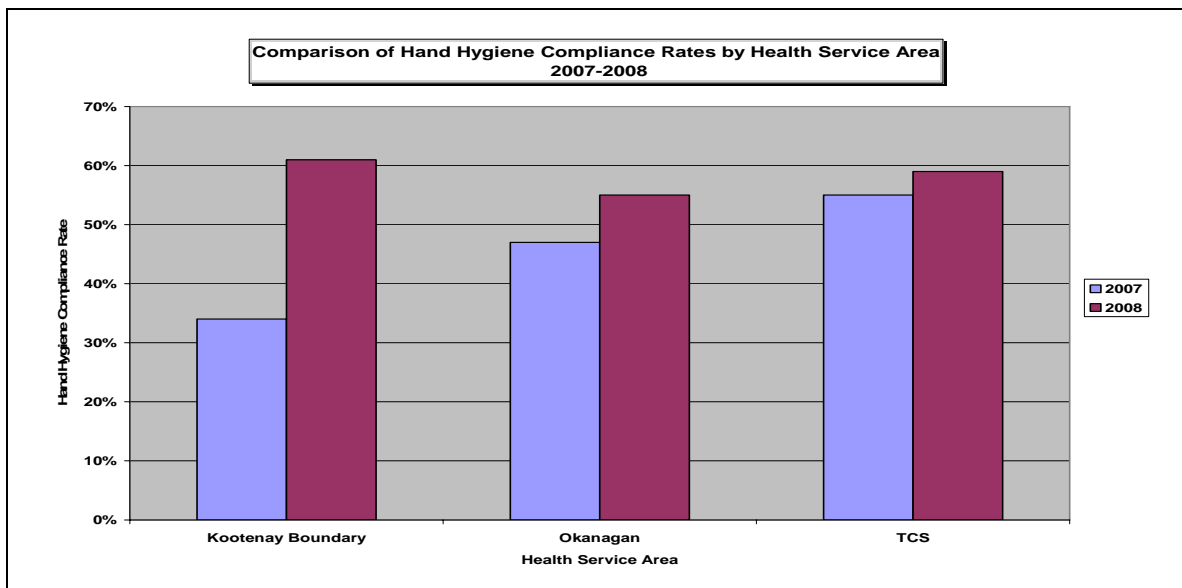
Hip and knee surgeries (shoulder, hip and knee arthroscopies and arthroplasties) and simple discectomies (i.e. high volume, potential higher morbidity procedures should an SSI occur) were used as the model procedures for this three month project.

The ICPs continue to work collaboratively with the SAFER Healthcare Now initiative teams at their respective sites.

The Infection Control Practitioners continue to participate in ongoing hand hygiene audits at their respective sites.

Hand Hygiene Initiative

The Interior Health Hand Hygiene Initiative was introduced in October 2007 in acute and residential care sites. The goal of this initiative was “to increase hand hygiene compliance rates of all Interior Health (IH) healthcare workers and reduce the incidence of health care associated infections (HAIs)”. Hand hygiene compliance rates increased overall by **12% during the first year of implementation**. However, the rates are still low, averaging **only 57% compliance for appropriate hand hygiene being implemented according to infection control guidelines**.



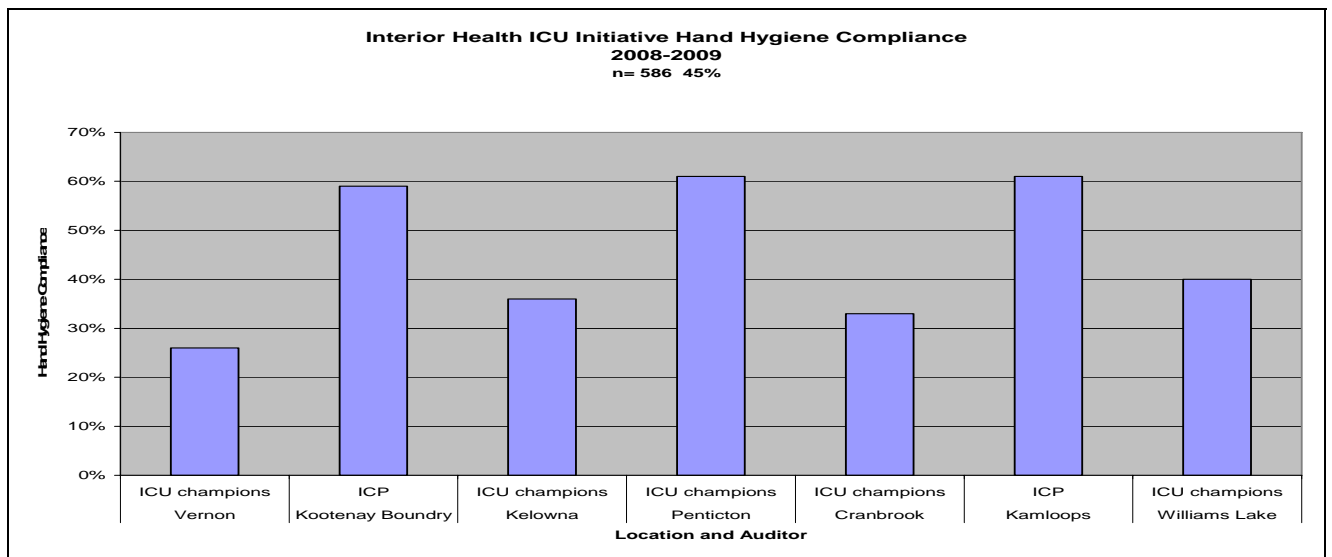
Interior Health Hand Hygiene Compliance 2007 -2008 campaign

The next phase of the IH hand hygiene initiative focused on hand hygiene compliance in Intensive Care Units across IH as they accommodate “higher at risk populations” in these areas.

With the support of ICU managers, infection control champions were recruited in most ICUs. These champions were trained by their Infection Control Practitioners (ICPs) to carry out the HH audits in their respective ICUs and provide the HH education to their coworkers. A power-point presentation was developed and incentives such as coffee gift cards and pens were provided to all champions for distribution to staff. Dr. Cheryl Holmes is the physician lead for the ICU HH initiative and is actively promoting physician support for this initiative.

In March 2009, initial data was collected using the same data collection observational tool from 2007-08 with a slight modification to ensure all healthcare disciplines were assigned into a specific category.

586 opportunities to carry out hand hygiene were observed by infection control champions. Hand hygiene compliance rates ranged from 26 to 61%. Of these observed opportunities, **45% had appropriate hand hygiene performed and 55% did not.**



Interior Health ICU Hand Hygiene Compliance 2008-2009

A second audit is currently being done and the ICU champions continue to promote appropriate practice and provide ongoing education to their coworkers.

The ICU HH champions’ participation has been a positive experience with incredible commitment by each champion. They provided positive feedback regarding ideas to improve HH compliance rates in their respective units. More importantly, this approach builds on the capabilities the staff already have rather than telling them how they have to change. Providing feedback to peers by peers leads to a “change in cultural practices in their work areas – now watch the culture change to healthcare workers with passion and integrity for ensuring hand hygiene compliance”!!

In order to ensure HH compliance rates continue to increase and in turn, reduce HAI rates, ongoing support from stakeholders and leadership, including financial support is vital to the success of this HH initiative.

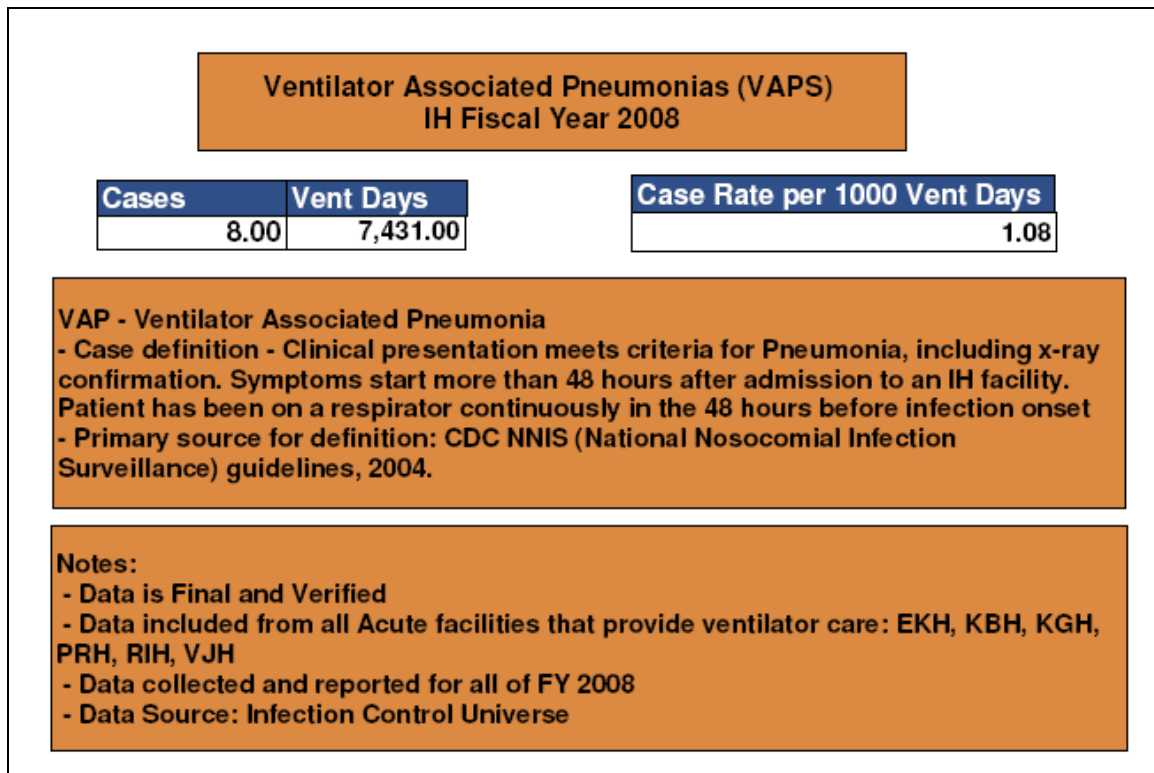
Surveillance

Surveillance is the ongoing and systematic method of collecting, consolidating and analyzing data regarding the distribution and determinants of a given disease or event. This is followed by dissemination of that information to those who can improve the outcome.

QME, the standardized surveillance program has been implemented in all acute care sites and steps are being taken to implement this program throughout the Residential Care sites.

Ongoing development of reports continues ensuring that the data presented is of the highest quality. This is a significant collaborative effort between IMIT and Infection Prevention & Control.

As of March 31, 2009 the surveillance indicators in acute sites includes *Clostridium difficile* infections (CDAD), Surgical Site Infections (SSIs), Ventilator Associated Pneumonias (VAPs), Central Line Infections (CLIs), and Antibiotic Resistant Organisms (AROs). Reports are available for VAPs, CDAD and SSIs. In the residential sites, surveillance indicators include catheter associated urinary tract infections (UTIs), skin & soft tissue infections (SSTIs), lower respiratory infection/pneumonia (LRIs), AROs and CDAD. No reports are currently available for residential services.



**IH Acute Healthcare Associated New CDAD
Infections FY 2008**

Fiscal Year	Case Count	Patient Days	Rate per 1000 Pat Days
2008	204	475,939	0.43

**IH Overall Acute Care Infection Rate for Healthcare Associated CDAD New
Infections: 0.43 cases per 1000 Patient Days**

CDAD - Clostridium difficile (C.diff) Associated Diarrhoea
 - Case definition - C. Diff toxin positive results and > 3 loose stools within in 24 hr period without another etiology, OR diagnosis of pseudo-membranes or toxic megacolon AND symptoms start more than 72 hours after admission or within 60 days of discharge from an IH facility
 - Counted as:
 - New Infection - No history of CDAD for this patient
 - New category established April 1 2009: "HealthCare Associated Relapse" defined as "A CDAD case with recurrence of diarrhea within 60 days of a previously resolved HealthCare Associated C.diff episode".
 - Primary source for definition: PICNet (Provincial Infection Control Network), 2008.

Notes:
 - Rate calculated as: (# Cases/Patient Days)* 1000
 - FY 2008 Reporting Period from April 1, 2008 through March 31,2009
 - Residential Locations within Acute Care Facilities are not included
 - Relapses were not collected during this period, and are not included in report.
 - Data Source: Statistical Universe, Infection Control Universe

**IH Surgical Site Infections (Clean and Clean-Contaminated)
FY 2008**

	Surgeries	Infections	Infection Rate
Clean	27672	273	0.99 %
Clean-Contaminated	19069	182	0.95 %

SSI - Surgical Site Infection:
 - An infection in the area affected by a surgery within 30 days of the procedure, or within 365 days if an implant is in place and infection related to operative procedure
 - Primary source for definition: CDC/NHSN (National Healthcare Safety Network) guidelines, 2008.

Notes:
 - This report includes SSI's related only to those surgeries with a Wound Class of "Clean" or "Clean-Contaminated"
 - Surgeries under Surveillance do not include those with no incision or Surgeries performed in Ambulatory Care.
 - This report is deals with a small dataset and as such is prone to large variance. Please use this data carefully. Small variations may occur over time due to changes and corrections in the source data.
 - Data Source: SSI Exec Report, Surgical Services Data Warehouse and Infection Control Data Warehouse

Cumulative data is not available at this time. We continue to work towards ensuring preoperative antibiotics are given at the correct time.

With no medical support and limited IMIT resources available to the IP&C program, detailed health associated infection surveillance data analysis for Interior Health as a whole is not readily available.

Outbreaks

Outbreak statistics are reported by the CD unit and are available on the BC Ministry of Health's website.

Policies & Procedures

Continued standardization of policies and procedures is a priority with Infection Prevention & Control. The Interior Health Infection Prevention & Control standardized manual includes the best practices in this industry. It is reviewed and updated on a yearly basis to ensure the most up to date information is available as the prevention and control of health care associated infections requires continual development of proactive measures and intervention strategies aimed at reducing the spread of infection and combating existing infections. The manual is accessible in hard copy at all Interior Health acute and residential care facilities and all private facilities. It is also available on the Interior Health website as well as the internal website.

Structure

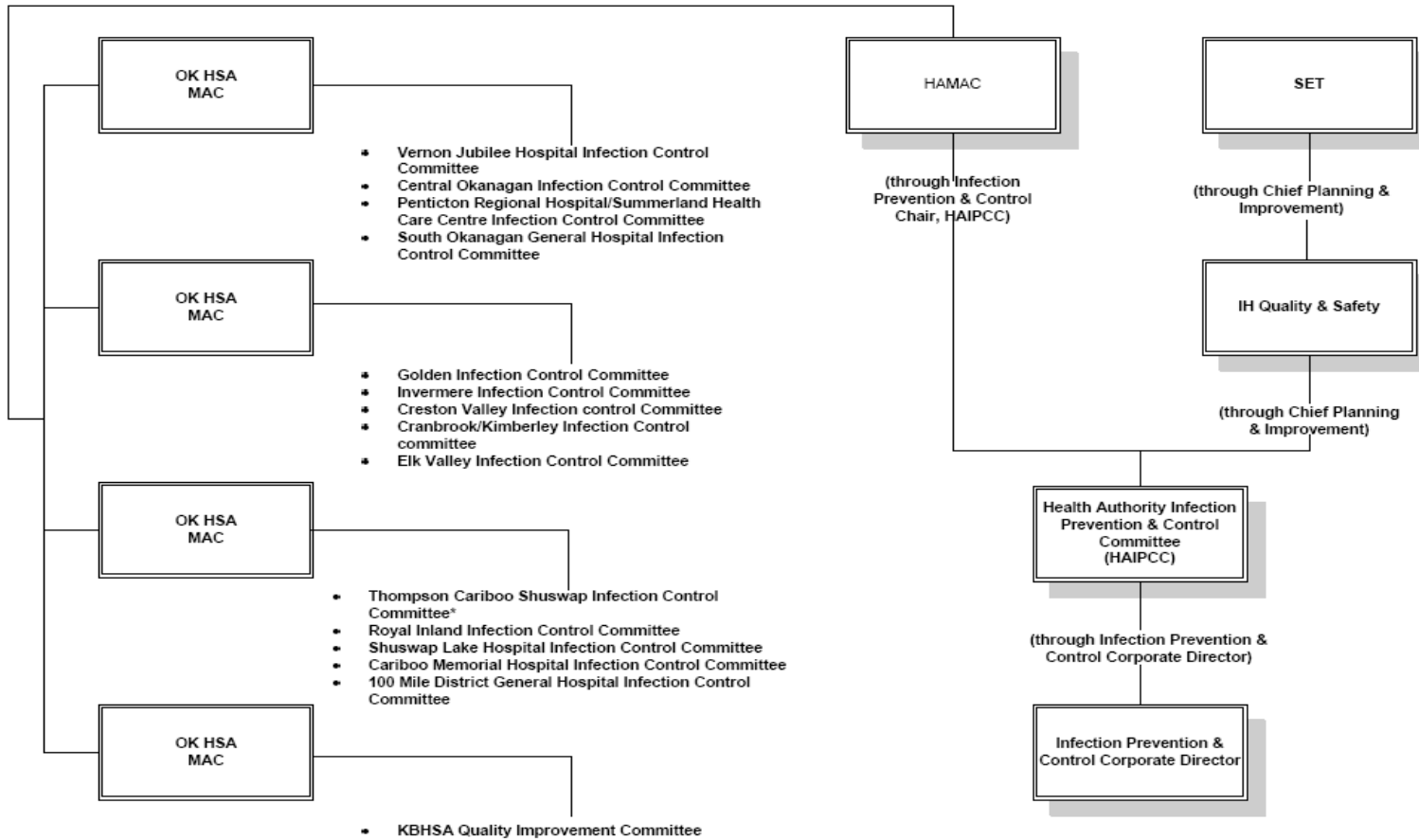
As of November 2008 Infection Prevention & Control became a corporate program with a Corporate Director under the administrative direction of the Chief Planning & Improvement Office.

Infection Prevention & Control crosses sectors, departments, and communities. For this reason there is an extensive network of committees responsible for Infection Prevention and Control. For purposes of practice, the Infection Prevention and Control Practice Committee advises recommendations through the Infection Control Corporate Director to the HAIPCC. For purposes of communication and quality, minutes from the fifteen sites and community Infection Prevention and Control committees are reviewed by the Corporate Director and issues are taken forward to HAIPCC as required.

While the Physician Leader position is vacant, the Chief, Planning & Improvement has chaired the HAIPCC. The HAIPCC has dual reporting and the Chief Planning & Improvement takes recommendations to HAMAC as well as IH Quality & Safety and SET.

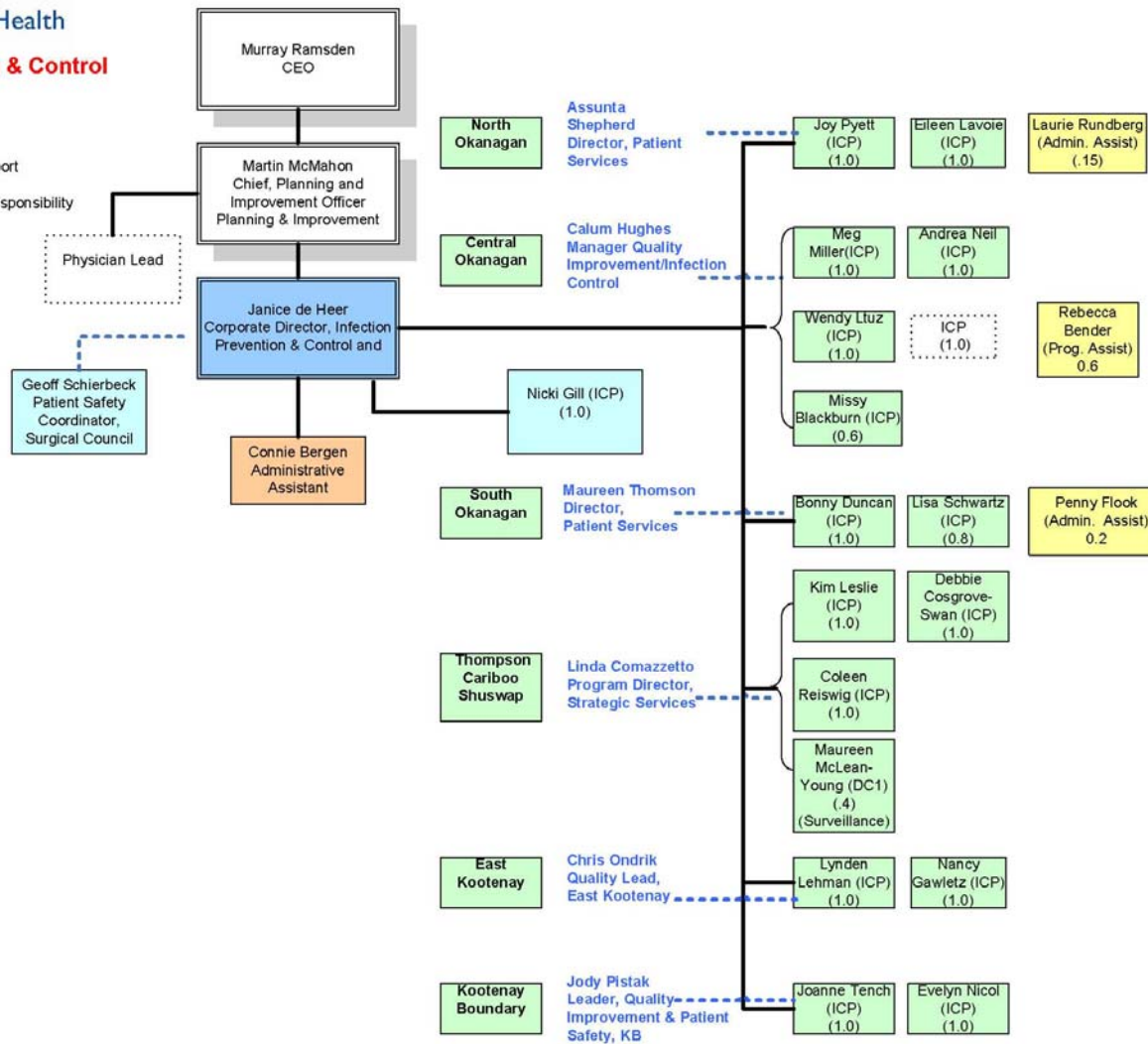
(See Organizational Chart)

Infection Prevention & Control Committee Structure



Interior Health
Infection Prevention & Control
(IP&C)
 Draft Sept
 2009

— Direct report
 - - - Matrix Responsibility



What are we going to do in 2009/2010?

In addition to the day-to-day activities that take place constantly to reduce the infection risk including daily rounds of clinical areas, the Infection Prevention & Control Practitioners will be involved in:

- Implementing the HAI surveillance program in residential care sites.
- Continuing with the Interior Health Hand Hygiene Initiative Part II, focusing on the ICUs at 6 major sites.
- Utilizing HAI surveillance information to guide the modification of clinical practice, while considering client mix and care setting.

The Infection Prevention & Control program will also be:

- Providing clean surgical site infection rates to the Senior Executive Team.
- Continuing development of the new Infection Prevention & Control practitioner orientation training program and manual.
- Developing and implementing educational opportunities to meet the educational needs of the staff, while ensuring consistency with established goals and objectives, and working collaboratively with other resources including IH WH&S and Educational Services.
- Recruiting physician lead/expertise at the Interior Health level.
- Continuing development of HAI surveillance data analysis reports for Acute Care and Residential Services.

In addition to the above, integration of the Infection Prevention & Control program into a regional program will continue throughout the next year.