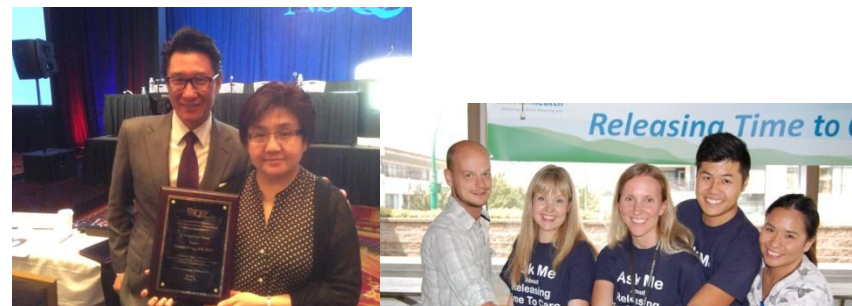




ANNUAL REPORT 2014/15
QUALITY AND PATIENT SAFETY
INFECTION CONTROL
COMMUNITY ENGAGEMENT

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Executive Summary

The delivery of the Annual Report is a time to describe our activities, collaborations and partnerships throughout VCH and reflect on the successes and challenges that occurred this year. This year, we have streamlined our Annual Report with the goal of providing a high level overview of our accomplishments and innovations with respect to our 3 foci of work – Quality and Patient Safety (QPS), Infection Prevention (IP), and Community Engagement (CE). Please visit the hyperlinked pages included throughout the report for more detailed information.

It was with mixed emotions that we said “good-bye and good luck”, to Linda Dempster, our former Executive Director as she joined Alberta Health Services as their Vice President, Collaborative Practice, Nursing and Health Professions. In her 24 years with VCH, Linda was a coach, mentor and a friend to many. Linda and Dr. John Shepherd began the QPS program in 2003 with IP joining in 2009. Linda’s “develop regional, deliver local” is a mantra many of us repeat on daily basis. We dedicate our 2014/2015 Annual Report entitled “Enhancing Patient Care” in her name.

VCH’s more than 9,000 nurses and 3,000 allied health professionals play an integral role in improving the health and quality of life of patients, clients, and residents. A generous donation by Mr. Robert H. N. Ho, led to a multi-faceted regional program to support education and professional development of nurses and allied health professionals with the view of improving patient care across the continuum. The program includes one of QPS’s key initiatives “Releasing Time to Care”, now renamed the “VCH Improvement Strategy”.

Healthcare associated infection (HAI) rates continue to improve with decreases in surgical site, urinary tract and respiratory infections. Several new projects speak to the creativity of our team, the enthusiastic support of our healthcare workers, and of contracted staff. An example is Angus, a Springer Spaniel who is being trained and assessed for his ability to detect *Clostridium difficile* in the environment. Eradicating reservoirs is one component of reducing the transmission of this organism and potentially Angus can help us with this particular aspect. Our *C.difficile* infection rate is

below the provincial average and well below our internal target but we believe we can decrease rates further with the help of our housekeeping staff, the use of Ultraviolet Disinfection technology and ongoing engagement of our Antimicrobial Stewardship team.

Our Community Engagement team continues to support VCH in engaging in meaningful and transparent dialogue with our community stakeholders. From program delivery projects in Vancouver’s Downtown East Side, to obtaining representation on steering committees and interview panels, the team has been a consistent and visible connection to VCH for patients and families to share their ideas for improvements as to how we structure and deliver our programs.

As VCH began design and the preliminary build of our electronic health record, members of our team were active participants in the Clinical and Systems Transformation (CST) project this past year. The CST project will improve patient care by making sure that our practices are evidence-based and reduce any unnecessary variations in clinical care practices.

Working in collaboration with our colleagues in Professional Practice and Risk Management and partnering with QPS colleagues at PHSA and Providence, we engaged with advisory committees, sat on design teams, and advised on technical/user interface aspects of the core system.

It would be impossible to outline every piece of work that has been undertaken within the last year. Ensuring safety and quality in the care we deliver is not the responsibility of one department, but an underpinning value of the work our department, VCH clinicians, physicians, and support staff perform every day. We thank them for their support and hope that you enjoy the summaries of the work contained within this report.

Elizabeth Bryce, Regional Medical Director, Infection Control/Medical Microbiology

Jacqueline Per, Clinical Quality and Patient Safety Director, Vancouver



VCH Improvement Strategy: Releasing Time to Care™

Releasing Time to Care (RT2C) is a quality improvement program that provides frontline staff with a systematic way to lead improvements in their work processes and environments so they can focus on putting patients at the centre of their care. Staff and physicians have the opportunity to affect change in a way that is meaningful to them, by working smarter rather than harder, and consequently freeing up time to focus on priority areas of care.

"I know for years nurses have talked about solutions but now we have the platform to actually do something to improve care. (Releasing Time to Care) allows the staff to improve the nursing standards on the unit and because we are so involved we are more encouraged to adhere to them."

(Nurse, Surgical, Vancouver General Hospital)

Since initiating the pilot at Squamish General Hospital (SGH) and three medicine units at Richmond Hospital (RH), RT2C was implemented in eleven new areas in 2014 and in twelve areas in 2015 that include medicine, surgical, mental health and addictions, the Operating Rooms (OR) and Community Home Health. In partnership with the BC Patient Safety and Quality Council and Maggie Morgan-Cooke, NHS Improving Quality, 8 new Faculty members were trained and now support the RT2C teams with their continuous quality improvement efforts.

Care Sensitive Adverse Events (VGH and RH)

Staff on the surgical (VGH T4C) and medicine (RH 3S and 3N) units are auditing their own care processes to check if standards for preventing patient adverse events are being adhered to. Every day staff mark whether there are patients with new onset urinary tract infections (UTI) or pneumonia on their Knowing How We're Doing data board and discuss change actions. The ICOUGH acronym helps patients and families remember the responsibilities they have to participate in improving their care outcomes. The improvement changes have led to an overall reduction of 18% in UTI and 35% in pneumonia on the three RT2C units.

More Surgeries In One Day (The Productive Operative Theatre – TPOT)

The interdisciplinary perioperative team at RH were able to successfully increase the number of breast reduction procedures performed from two to three in one day. By incorporating a Start-of-the-Day huddle the team elevated their situational awareness of equipment needs and potential delay events. Improvements in coordinating patient preparation and turnover times between last patient exiting the OR to the next patient entering, was also instrumental to making the extra case possible. The team will be looking to implement the changes in other surgical specialties to have more efficient use of prime OR time and to potentially reduce waitlists.

SGH made advances with standardizing processes to ensure a normothermic core body temperature is maintained in all their surgical patients through the perioperative phases. The LGH perioperative team is working on improving first cases starting on time and reducing cancellations. They will hold their first interdisciplinary rounds in Fall 2015 with a focus on OR culture, teamwork and communication.



LGH Perioperative Team

Mental Health and Addictions and the Patient Experience

Patient satisfaction at the Powell River General Hospital inpatient psychiatry unit (IPU) improved in four dimensions of care since implementation of RT2C. Daily tracking and change efforts for seclusion room use, preventing aggression and violence events and having daily staff huddles to discuss ideas and generate actions resulted in an average 19% improvement in patients being treated with dignity and respect, feeling safe, having access to care and understanding their treatment plan after discharge.

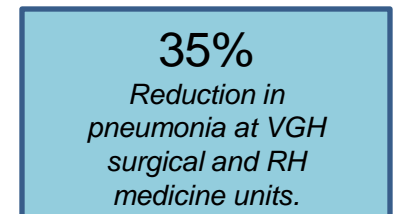
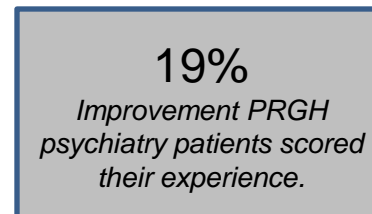
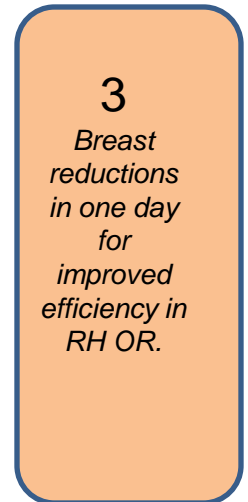
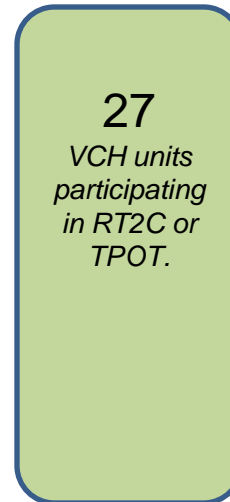
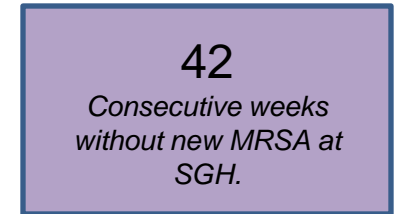
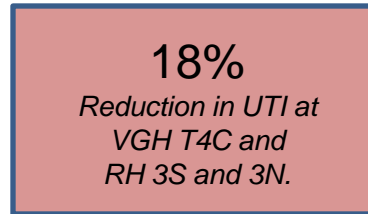
Mr. Robert H.N. Ho and Mrs. Greta Ho Contribute \$2.5 Million to Enhance Patient Care

Mr. Robert H.N. Ho and Mrs. Greta Ho recognize the importance of investing in frontline care providers as leaders in driving the changes needed to enhance patient care. To that end, Mr. Robert H.N. Ho and Mrs. Greta Ho established a \$2.5 million fund over a 5-year period towards RT2C as one of five pillars that will support the professional learning and engagement of staff. Matching funds from VCH, UBC/VGH Foundation, Lion's Gate Hospital Foundation increase the program's impact to foster and develop a sustainable and patient-centered healthcare environment.

What are the plans for next year?

- Implement RT2C on at least 5 new units or departments in 2015/16.
- Develop a performance measurement system that informs the Board and senior leaders and also is understandable and useable for unit-led improvement and leader standard work.
- Further harmonize RT2C and Lean framework to support the strategic priorities and initiatives of VCH.
- Continue to build a cascade of shared leadership that roots from the Ward Leads to every team member.
- Frontline staff to present learnings and successes at Quality Forum 2016.
- Develop capacity for patient-centered care so that is embedded in everyday practice.

Releasing Time to Care By The Numbers

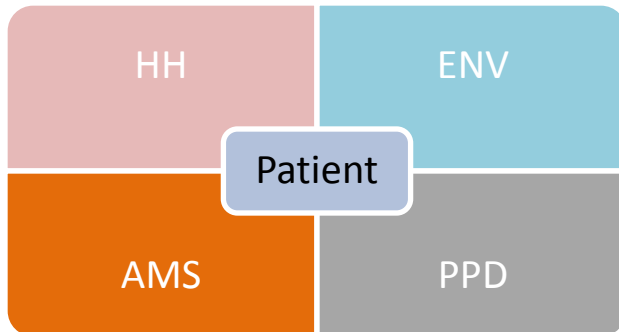


4 Cornerstones Environmental

In 2000, Canada reported over 200,000 HAIs at a cost of approximately \$1 billion per year (Auditor General of BC 2007). Increasing HAIs was the impetus for the VCH 'Four Cornerstone' initiative which began in 2012.

HAIs are caused by multifactorial factors such as:

1. Sub-optimal **H**and **H**ygien**e** by staff, visitors, and patients
2. Inadequate **A**ntimicrobial **S**tewardship
3. **P**olicy and **P**rocedure **D**evelopment
4. **E**nvironmental issues dealing with clutter, cleaning, multiple bed patient rooms, over-crowding, etc.



Sustained reduction of HAIs

The Environmental 'cornerstone' provides education and strategies for decluttering, cleaning, disinfection, and equipment management. The Environmental cornerstone is a key element that works in close partnership with the other three cornerstones.

Decluttering

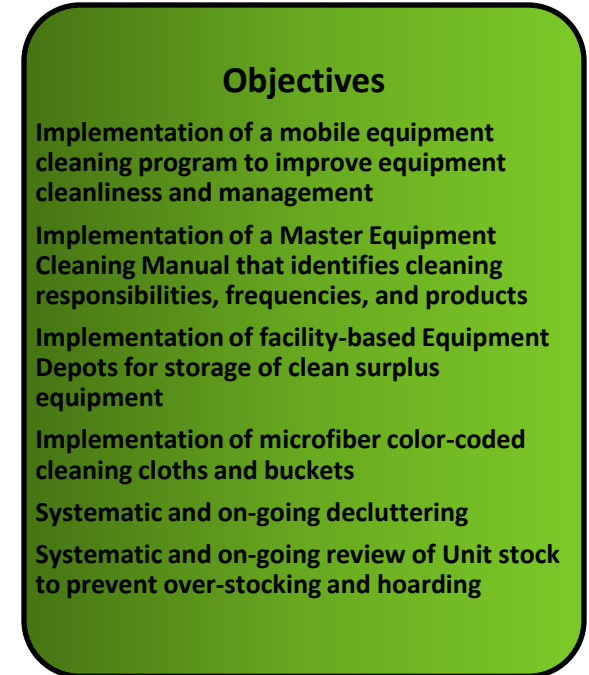
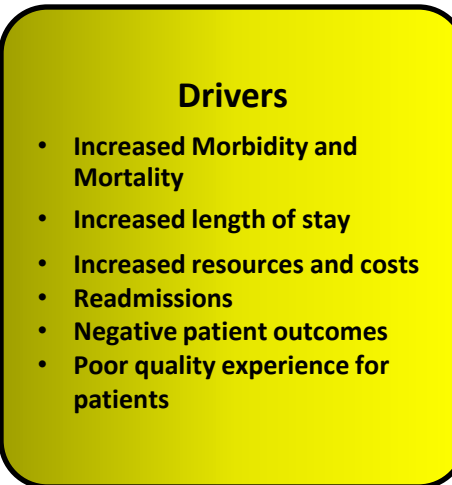
Decluttering initiatives reduce HAIs by getting rid of worn, torn, broken and obsolete items which pose infection control risks and allows items and surfaces to be thoroughly cleaned.



Decluttering has the added benefit of preventing slips, trips, falls, reducing injuries to patients, visitors, and staff.

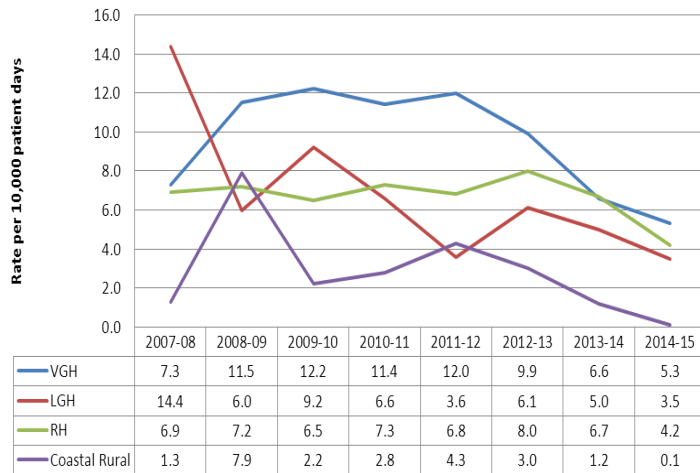
Patients and Families feel 'safe' in clean and organized environments.

This multidisciplinary approach, in conjunction with a regionally standardized IPAC Program, addresses strategies to reduce HAIs.



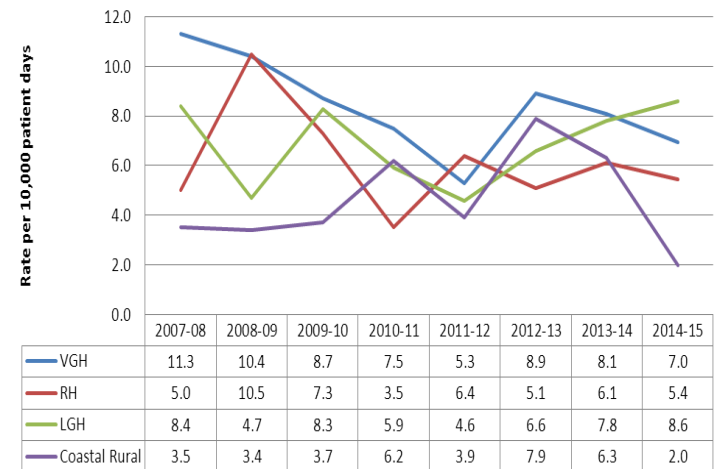
CDI Success: HH - ASPIRES - IMIT - Environment

CDI Annual Nosocomial Rates by Fiscal Year



MRSA Success: HH - ASPIRES - IMIT - Environment

MRSA Annual Nosocomial Rates by Fiscal Year



Current and Ongoing Environmental Initiatives

- Daily and Annual Decluttering
- Standardized Cleaning and Disinfection including tools for cleaning and disinfecting the environment and equipment (e.g. microfiber and UVC)
- Standardized IC “Back to Basics” Education
- Current IC Manual and Toolkits for Disease Management
- Unit GI Checklist Tool
- ‘Clean Sweep’ protocol for top to bottom Unit clean
- ATP tool to identify protein on environmental surfaces and equipment potentially from infectious microorganisms
- Facility -based surplus clean equipment storage areas
- Mobile equipment cleaning program (e.g. pumps, wheelchairs)
- VCH Master Equipment Cleaning Manual
- Implementation of Audit Tools (e.g. Clean Equipment Depot Audit Tool, Unit Environmental Declutter Audit Tool)
- Consideration of a Regional Central Equipment Depot as facility-based equipment depot locations have over-flow surplus beyond their capacity

“The coming year will see changes in our housekeeping structure and it will be important to ensure that the transition from one provider to the other is as seamless as possible and that the mitigation strategies are in place to deal with any changes in our HAI rates.” - Dr. Elizabeth Bryce

4 Cornerstones Antimicrobial Stewardship Programme (ASPIRES)

Antimicrobial stewardship is the practice of optimizing antibiotic use for the treatment of infections. This practice is essential as inappropriate use of antibiotics is associated with increased resistance of bacteria. Antimicrobial stewardship aims to preserve the effectiveness of antibiotics, treat infections more effectively, and improve patient outcomes.

ASPIRES is the Antimicrobial Stewardship Programme in the QPS Department at VCH. ASPIRES convened in November of 2012.

Figure 1. Timeline: ASPIRES' Clinical Activities



We promote appropriate antibiotic prescribing through:

- Quality Improvement Initiatives
- Clinical Tools and Guidelines
- Education and Research
- Audit and Feedback of Antibiotic Prescriptions

Audit and Feedback of Antibiotic Prescriptions

ASPIRES continues to perform prospective Audit and Feedback activities on a daily basis. Audit and feedback is an evidence-based practice of reviewing a patient's antibiotic therapy with the prescriber

and making recommendations to optimize treatment, when appropriate. Our Audit and Feedback recommendations most often include:

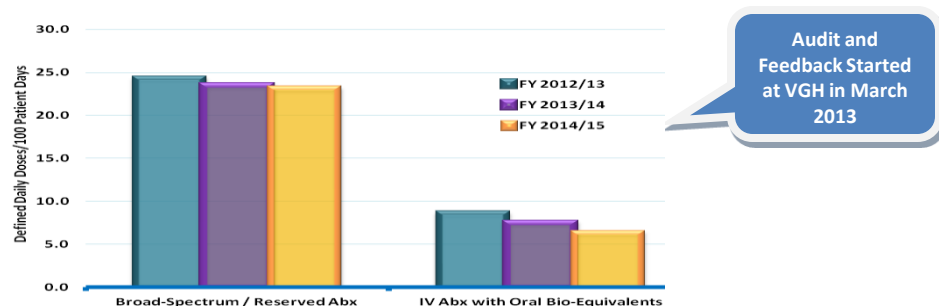
- ❖Selecting the most appropriate antibiotic with the narrowest spectrum, based on clinical status, indication, and culture results.
- ❖Converting intravenous (IV) to oral antibiotics.
- ❖Discontinuing unnecessary antibiotic therapy.

Table 1. Summary of ASPIRES Audit and Feedback Recommendations

	VGH	RH	LGH
Measures	Mar 15, 2013 – Mar 31, 2015	Apr 11, 2014 – Mar 31, 2015	Oct 1, 2013 – Mar 31, 2015
Treatment recommendations (N patients)	1210	127	266
Recommendations accepted by Prescriber (%)	78%	96%	59%
Change in target antibiotic use (DDD/100 patient days)	↓3.5	↓2.6	↓0.6

For Audit and Feedback, ASPIRES targets broad-spectrum and reserved antibiotics prescriptions for review, since it is important to preserve the effectiveness of these antibiotics to treat severe infections. We also assess IV antibiotics for the possibility of changing them to oral therapy to prevent complications associated with IV administration. Broad-Spectrum or Reserved Antibiotics: Ceftriaxone, Daptomycin, Imipenem, Meropenem, Piperacillin-tazobactam, Vancomycin
IV Antibiotics with Oral Equivalents: Ciprofloxacin, Clindamycin, Co-trimoxazole, Linezolid, Metronidazole, Moxifloxacin

Graph 1. Utilization of Target Antibiotics at Acute Care Units, VGH



Clinical Tools and Guidelines

This year, we developed and updated clinical resources to assist physicians with diagnosis and management of infections:

- Anti-Infective Comparison Card (collaboration with Medical Microbiology, Pharmacy, and Infectious Diseases)
- Febrile neutropenia pre-printed physician orders (collaboration with Leukemia/Bone Marrow Transplantation)
- Reserved antibiotics pre-printed physician orders (collaboration with Pharmacy)
- Skin and soft tissue infections guidelines (collaboration with Emergency Department)
- Surgical antibiotic prophylaxis guidelines (collaboration with Providence Health Care Antimicrobial Stewardship Program and Departments of Surgery)

Partnership with Rural and Remote Sites

In January of 2015, SPIRES extended our support to local clinicians at our rural and remote sites in order to address their antimicrobial stewardship concerns. We also gathered baseline information on antibiotic usage patterns to track trends overtime, and developed site-specific clinical guidelines. Our rural and remote sites met all 5 Antimicrobial Stewardship criteria for hospitals set by Accreditation Canada.

Quality Improvement Initiatives

ASPIRES continuously works with other clinical groups to develop quality improvement initiatives in the diagnosis and management of infections.

So far, we have targeted the most common infections in our hospitals:

- Clostridium difficile* Infection
- Community-Acquired Pneumonia
- Skin and Soft Tissue Infections
- Urinary Tract Infection

Clinical and Systems Transformation

In preparation for the transition to the new electronic healthcare system, SPIRES has been working closely with the Clinical and Systems Transformation team to design the required antimicrobial stewardship functions and ensure seamless transition of our services. We are also involved in the review of all antibiotics order-sets for implementation in the new system.



Awards and Presentations:

2015 BC Healthcare Award for Collaborative Solutions - This award highlights the shared efforts with our clinicians and healthcare staff in promoting antimicrobial stewardship practices and recognizes the significant contributions of all our collaborators at VCH.

ASPIRES presented 3 invited lectures and 4 research posters at the European Congress of Clinical Microbiology and Infectious Diseases, PICNet CDI/CPO Symposium, The Quality Forum, and the Canadian Society of Hospital Pharmacists AGM.

Community Engagement

The Community Engagement (CE) team at VCH works to develop and enhance patient and public participation in health service planning and decision-making, so that members of the public have a voice in the services and policies that affect their lives. Working across the health region and all sectors of care, the CE team encourages and supports opportunities for dialogue between VCH and its communities. The Community Engagement Advisory Network (CEAN) is a group of public volunteers that the CE Team manages and supports to help bring the voice of the public into planning at VCH. This past year CEAN membership has grown to 120 members. We observed a 34% increase from last year and are continuing to grow! By March 2015 there were 36 CEANs sitting on 20 VCH Committees as patient/public advisors. Five additional committees have recruited CEANs from last year's count of 15. This number continues to grow rapidly! We are now constantly recruiting for VCH Committees.

In September of 2014 CEAN received two Core Values awards from the [International Association of Public Participation](#) (IAP2) - Creativity and Innovation in the Field and Project of the Year.



Belinda Boyd, Barbara Greenlaw (CEAN member), Saori Yamamoto and Katie Hume – CE Team at the IAP2 Awards Night Gala in Winnipeg

Annual CEAN Fall Forum

In November of 2014 CEAN members and VCH Staff, along with members of VCH's Senior Leadership Team, as well as members of the Patient Voices Network gathered in downtown Vancouver to have a chance to dialogue and workshop a couple of relevant topics for VCH. The afternoon workshops had CEAN members providing feedback on the My Health My Community online survey data as well as Patient Centered Care and sustainability. CEAN members were particularly impressed by VCH's CEO Mary Ackenhusen who spoke about VCH's strategic priorities for the coming year. Mary was appointed as VCH's CEO in April of 2014 and this was her first CEAN Forum. Click [here](#) to read the report.

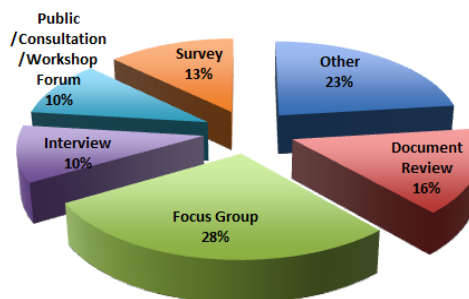


Attendees at CEAN Fall Forum 2014

Public Consultations

We consulted with patients and the public on 39 projects. Together, our CEAN members and participants in these public consultations contributed more than 1300 hours of volunteer time to improving patient care.

Methods of Engagement



"If I can see the contributions I made and I multiply it by the number of people it makes a great impact. We are the end users of the system and by not consulting us you would be losing an important voice. I encourage it to continue"

Quality Forum 2015

The CE Team was very happy to be able to attend and be involved in the 2015 Quality Forum, organized by the BC Patient Safety and Quality Council. We were also very happy to be able to sponsor 6 CEANs to participate in the forum. The CE team was invited to participate in the Storyboard Presentations that displayed quality improvement initiatives throughout our organizations. What initiative did we choose to represent quality improvement at VCH? CEAN of course!

Looking Ahead

Continued requests to engage with patients and the public will challenge the CE team to provide the needed support to ensure the voice of those most impacted by the decisions to be made are engaged in those decisions.

CAPACITY BUILDING – through delivery of our CE Curriculum and support for Lean training CE will work to embed the practice of patient and public engagement throughout the organization.

GROW AND DIVERSIFY CEAN - through recruitment of CEAN members from rural and remote areas to expand engagement throughout the Coastal community of care.

DIRECTLY LEAD PATIENT PUBLIC ENGAGEMENT

Primary and Community Care – engage seniors to help develop better ways to keep seniors well in their home and community.

MARKET AND COMMUNICATE PATIENT PUBLIC ENGAGEMENT

National Health Engagement Network - networking with health entities across Canada to share tools and knowledge as a leader in the practice of PPE.


CEAN Website – We are currently working on a new and improved website for CEAN. The website will provide information on CEAN, and be a resource for CEANs to receive news and information, sign up for projects and network.

EVALUATE AND INNOVATE

Advisory Program Review – with the support of a practicum student we have been able to conduct an evaluation of our Patient and Public Advisors Program. This evaluation will allow the CE team to understand how best to support advisors and VCH staff. The feedback received will inform updates to our processes as well as to the tools we have created to support advisors and VCH staff to work effectively together.


The Community Engagement Advisory Network


Improving the Quality of Care at Vancouver Coastal Health



WHO CAN JOIN?
Adults who live or work within the Vancouver Coastal Health area except for VCH staff.

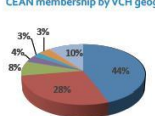
Formed in 2009, the VCH Community Engagement Advisory Network (CEAN, pronounced keen) is a group of 117 (and growing!) public volunteers who are engaged in quality improvement with Vancouver Coastal Health (VCH). CEAN members are involved in projects across the healthcare continuum at various levels of engagement. The common driver in all the projects is that patient/public input improves the decisions we make, the quality of care, and ultimately, health outcomes. CEAN is supported by VCH's Community Engagement department.





117 members

CEAN membership by VCH geographical area:



METHODS OF ENGAGEMENT

- Surveys
- Document Reviews
- Focus Groups
- Workshops
- Forums
- Sit on VCH Advisory Committees
- Peer workshops

HOW DO WE MEASURE SUCCESS?

- Process evaluations
- Project evaluations
- Annual CEAN evaluation
- Annual VCH Leadership evaluation
- Increase in engagement requests and in number of CEANs placed on VCH Committees
- Growth of CEAN

The 2014 CEAN evaluation shows that **86%** of the respondents feel that their opinions are valued and **70%** agree that VCH values public involvement.

- A **70%** increase in the number of departments consulting with VCH (Community Engagement 2013 to 2014).
- A **20%** increase in the number of CEAN members on Advisory Committees in the past year
- A **33%** growth in CEAN membership in the past year

In 2014, CEAN won the "Project of the Year" award at the International Association of Public Participation's (IAP2) Core Values Awards. CEAN also won the award for "Creativity, Innovation and Contribution in the Field".

CEAN INVOLVEMENT IN RECENT VCH PROJECTS

DECLUTTERING & HAND HYGIENE
Reducing the incident of hospital-acquired infections is a priority for VCH hospitals. The Infection Control team of VCH sought public input on how patients and family members can partner with staff to achieve higher rates of cleanliness and reduce infections. We asked CEANs:

- How should VCH engage patients and families in reducing clutter in patient rooms?
- How should VCH engage patients and family members to encourage staff to wash their hands when providing care?
- What types of messaging might be effective in promoting the clustering of patient rooms and hand washing?

Feedback given by CEAN was used to help inform the campaign in VCH hospitals.

ICOUGH PROJECT
ICOUGH is a pneumonia prevention quality initiative at VCH which began in 2013. ICOUGH is used as a mnemonic and means:

- Breath in and hold
- Coughing with deep breathing
- Oral care
- Understand your risk
- Get moving
- Head of bed up.


Feedback was given by CEAN to revise the audit tool to get higher rates of patient compliance, as well to revise the patient education poster used in hospital.

PERIOPERATIVE CARE CENTRE
The Perioperative Care Centre at VCH is an open design unit. This model allows for nursing staff to have eyes and ears on all patients, but also means less privacy and quiet spaces. CEAN members participated in a focus group to develop messaging that could be provided to patients and family members prior to admission to the unit. Former patients of the unit were also interviewed.

Feedback gathered was used to help develop messaging to better prepare and inform patients and family members on what to expect when in the Perioperative Care Centre. The feedback was also used for education and training with staff to enhance practice and improve patient experience.

CHALLENGES

- Organizational culture shift towards patient/public engagement.
- Small team's capacity to support and grow CEAN, especially in rural communities
- Meeting the growing demand for CEAN placements
- Ensuring diversity among CEAN membership when involvement requires computer literacy & access as well as English proficiency.
- Capitalizing on on-line opportunities for engagement



For more information contact: Community Engagement, Vancouver Coastal Health ce@vch.ca www.vch.ca/ce

"One of the key contributions is that they readily provide their input from a "consumer" or patient perspective - and it is this feedback that often helps direct the conversation i.e. moving from focusing on what matters to a clinician to what matters to a patient and family/caregiver"- VCH Staff member on their experience working with CEAN

National Surgical Quality Improvement Program (NSQIP)

NSQIP systematically samples around 7,600 cases annually between the 4 sites: UBC, LGH, RH and VGH. Data is collected by Clinical Quality and Safety Coordinators reviewing patient records and conducting 30 day post-surgery patient follow up which includes telephone surveys. The data collected is rich in pre/intra/postoperative information and provides risk adjusted reports as well as non-risk adjusted reports. This data is used to provide metrics to quality improvement teams for a number of VCH quality initiatives. The Coordinators help facilitate the local teams with their quality improvement goals.

Emergency General Surgery Pilot

The VGH Acute General Emergency Surgery Team is one of 15 hospitals invited to participate in a 6 month pilot capturing data on operative and non-operative patients with acute appendiceal disease, acute cholecystitis and small bowel obstruction. This is the first NSQIP study to look at surgical interventions compared to non-surgical interventions. The collaborative results will have the potential to improve care for this patient population.

Enhanced Recovery After Surgery (ERAS)

This is a multimodal evidence based peri-operative care pathway benefiting colorectal and cystectomy patients at VGH. Collaboration and teamwork is the key to improving patient outcomes with this high risk population. The success of this team is of high interest to other surgical teams within VCH. The tools created by the VGH ERAS team are an invaluable resource for the teams that will be adopting these best practices in the near future.

Patient Outcomes: Pre- vs Post-implementation Elective Colorectal Cases

	Pre-Implementation Jul 2011-Jun 2013	Post-Implementation Nov 2013-Aug 2014
Number of pts	99	179
NSQIP Morbidity *	27 (27.3%)	25 (14%) 48.7% reduction
Total SSI *	20 (20.2%)	20 (11%) 45% reduction
Superficial SSI	11 (11.1%)	13 (7.3%)
Deep SSI	2 (2%)	1 (0.6%)
Organ space SSI	7 (7.1%)	6 (3.4%)
Readmissions	7 (7.1%)	21 (11.7%)
Median LOS (IQR 25-75)	7 (5-11 days)	↓5 (4-8 days)

* p-values <0.05 Chi-squared tests
ACS NSQIP Non Risk Adjusted Data

Team Quotes

"I found the booklet very, very useful and I read it several times. I realized things that I missed with the first reading. I am pretty much implementing all of the things...both before and now that I have had my surgery".....ERAS patient



Dr. Maraghi explaining ERAS protocol with lay education booklet



"I were able to start the ostomy teaching on POD # 1...the patient feel well enough and is motivated to participate in the learning".....D. Cutting, stoma care nurse

Mortality and Morbidity (M&M) Reporting Tool for VGH General Surgery

NSQIP created a e-survey tool to help the general surgery residents record any complications that patients may experience during their stay at VGH. This will help the team report out on them at their weekly M & M rounds and improve patient care through this shared learning. In addition, it allows a comparison to the recorded post operative occurrences in NSQIP. (Snapshot of survey tool)

e sign number from #1-10 include preleading "0"s

*Surgeon
The selected surgeon will be automatically emailed a
If surgeon is not listed (eg. locum), please enter the .

Select:

*Your name

*On which service was the operation performed?
Select:

*What was the booking status for the operation?
Select:

*OR Date

*Is this a readmission?
 Yes
 No

*Post-op complications

Anastomic leak/failure SSI Wound dehiscence Pneumonia
 Unplanned Intubation PE DVT MI
 Cardiac Arrest (req. CPR) Renal failure Dialysis UTI
 Sepsis Septic Shock Hemorrhage

*Clavien Dindo classification for surgical complication

Improving Teamwork and Culture

Through facilitating team meetings and data analysis, our coordinators have assisted The Productive Operating Room (TPOT) at RH and LGH and Releasing Time to Care (RT2C) at VGH T4C and RH 4N/6N. We will continue to support these teams with their continuous quality improvement journey. Our future goals include supporting other surgical teams with their RT2C journey.

Surgical Site Infection (SSI) Prevention

This year NSQIP facilitated multidisciplinary quality improvement teams with RH plastic surgery, LGH OR and VGH orthopedic surgery. NSQIP continues to be involved with VGH cardiac surgery team to reduce the number of SSI infections per year. SSI prevention protocols are also embedded in ERAS. Through the best practices adopted in ERAS, all surgical patients at VGH benefit from hypothermia prevention protocols, weight based dosing of pre-operative prophylactic antibiotics, intra-op re-dosing of antibiotics if required, and the elimination of pre-operative fasting. The new diet guidelines help manage hyperglycemia which increases one's risk factors for SSI. The plan for this coming year is to continue the collaboration with Infection Control and Professional Practice and create SSI working groups with other surgical services at VCH to help improve surgical care.

Urinary Tract Infection (UTI) Prevention:

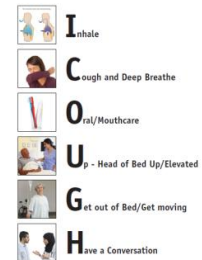
This is an ongoing collaboration throughout the organization with local surgical teams, Professional Practice and Infection Control Practitioners. NSQIP is currently working with the OR team to reduce the number of indwelling catheters inserted in the OR. The first trial group was neurosurgery. The pilot group of 42 patients saw 8 catheters avoided. Notably, 100% of the cases had a conversation about the need for a catheter. The success of this initiative is now spreading to other surgical services in the VGH OR.

Pneumonia Prevention:

The ICOUGH program has continued to evolve and spread through VCH over the last few years. The ICOUGH principles and poster are used at LGH, RH and on various surgical units at VGH. The units that have embedded the ICOUGH principles in their daily care continue to show a decline in their pneumonia rates. NSQIP will continue to work with these units and help other units implement the ICOUGH bundle.



Preventing Pneumonia: ICOUGH



Awards & Achievements

Kelly Mayson (NSQIP Anesthesia Champion) had 3 posters accepted for presentation, Tracey Hong (RN) was awarded the highest honor at the 2015 NSQIP annual conference for her abstract on “How the Implementation of an Enhanced Recovery after Surgery (ERAS) Protocol Can Improve Patient Outcomes”, and the BC ERAS Collaborative recognized the VGH ERAS team as leaders in the province.

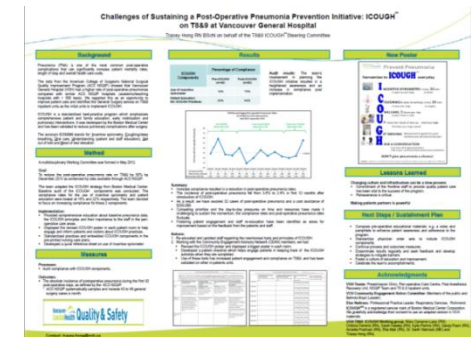


Andrea Bisailon, Dr. Kelly Mayson, Tracey Hong & Garth Warnock



The Cardiac Surgery Quality Improvement Team was awarded a VGH People First Merit award recognizing this team for their commitment to improving surgical care for cardiac patients.

Award winning 2015 Quality Forum poster for ICOUGH results on the general surgery unit at VGH.



Accreditation

Accreditation is one of the most effective ways for VCH to regularly and consistently examine and improve the quality of its services. We participate in Accreditation to evaluate and enhance our services and demonstrate that they meet national quality standards. The process is voluntary and all health authorities in BC participate. Accreditation is also an opportunity to showcase our leading practices and success stories, and celebrate the excellence of our staff, physicians and volunteers.

During an accreditation site visit, a team of trained Accreditation Canada surveyors tours our sites and conducts a number of observations and interviews with staff, physicians, patients and families to assess how our day-to-day delivery of care and services aligns with the [Accreditation Canada Standards of Excellence](#).

Achievements in 2014/15

Historically, VCH participated in accreditation by undergoing separate site visits for each Community of Care (CoC), taking place in different years over the course of a four-year cycle. Over the course of 2014 and 2015, VCH began transitioning to a more regionally integrated model, which will see VCH host its first health-authority-wide site visit in September 2016, and then every four years thereafter.

By having all CoCs in VCH working towards the same site visit, using the same version of the standards, this new model of accreditation is expected to provide better alignment with other VCH-wide initiatives such as CST, CCM, and 48/6, which aim at reducing unintended variations in care. In order to complete our transition to a single, VCH-wide site visit in September 2016, VCH hosted a supplementary, or "bridging" site visit in June 2015 to the Coastal CoC, which successfully extended our accredited status for a year. This was also our opportunity to trial the proposed regionally coordinated approach to preparing for 2016, in a smaller, yet very diverse scale spanning urban, rural and remote sites.

Based on self-assessment results, working groups were convened to address the highest-priority Required Organizational Practices (ROPs), with leadership from both regional and local content experts, who guided and collaborated closely with local operations leaders, clinical leaders and Professional Practice to implement consistent standards of practice within local resources available. Site visit results showed tremendous gains throughout Coastal sites in all the targeted ROPs.

What's Next for 2015/2016

As Coastal prepared for its June 2015 site visit, the rest of VCH also began preparing for accreditation by self-assessing on the standards that will be evaluated in September 2016.

Based on results from self-assessments, combined with Coastal site visit results, VCH was able to identify a set of "vital few" top-priority ROPs that will require regionally coordinated work to achieve consistent compliance across VCH. These Regional ROP-focused Working Groups will be responsible for developing a VCH-wide action plan with common expectations and standards of practice, and leading local implementation by linking with local operations, clinical and professional practice leads across VCH.

Under the leadership of the Regional Trauma Program, VCH also participates in the new Accreditation Canada Trauma Distinction program. Accreditation Canada and the Trauma Association of Canada (TAC) launched Trauma Distinction in September 2014 as the new designation of excellence for trauma centres, an evolution of the now-discontinued TAC Trauma Accreditation program. VCH will participate as a regional trauma network that includes all VCH acute sites, Providence Healthcare hospitals, and BC Children's Hospital. The first Trauma Distinction site visit for the VCH/PHC/PHSA network is scheduled for February 2016, and will include both centre-specific standards for all levels of trauma care, as well as trauma system-wide standards.

Patient Experience

In 2002, the BC Health Leadership Council launched a province-wide initiative to monitor patient experience of care in priority health care sectors, starting with BC's Emergency Department services.

The initiative's mandate was to implement a coordinated, cost-effective, scientifically rigorous, standardized, provincial approach to measuring patients' experience of care, which would achieve the dual aim of:

- Public accountability - to measure and report the performance of the health care system from the perspective of our patients and clients, and
- Internal quality improvement - to support and inform quality improvement initiatives at the point of service, both at the regional health authority strategic level and local care-unit tactical level.

Since 2003, the BC Patient Centered Measurement Steering Committee (BCPCM), with representation from the Ministry of Health and all BC Health Authorities, has conducted provincially coordinated surveys in a range of health care sectors, including Emergency Department Care, Long Term Care, Acute Inpatient Care, Mental Health and Substance Use, and Outpatient Cancer Care.

Achievement in 2014/2015

With the introduction of new accreditation requirements around measuring patient experience and using the results for improvement, BCPCM worked closely with Accreditation Canada and, subsequently, Canadian Institute for Health Information (CIHI) to develop national standards for patient experience measurement in acute care. Under the leadership of CIHI, the new CPES-IC (Canadian Patient Experience Survey – Inpatient Care) was developed, and began being implemented across several Canadian provinces, as part of CIHI's Health System Performance reporting initiative.

BCPCM has since further developed the CPES-IC tool to add and cognitively test made-in-BC questions, including an expanded section on care transitions in and out of acute care, as well as a section on Patient Reported Outcome Measures (PROMs), making BC one of the first jurisdictions in Canada to integrate patient reported experience measures (PREMs) and PROMs into the same mandate of patient centered measurement.

At the same time, BCPCM began the transition of BC's current Emergency Department survey tool to one in the same family as the CPES-IC tool, with consistent question themes and response scales, with the aim to be able to integrate the two into a single modular survey that spans patients' end-to-end experience with hospital care.

Other sector surveys that BCPCM is in the process of developing include Long Term Care (resident and family/frequent visitor), and Home Health (home care and home support), both of which are in collaboration and under the leadership of the Office of the Seniors' Advocate.

Over the course of 2015, BCPCM successfully negotiated with Accreditation Canada an agreement that recognizes BC's mandate to survey patient experience provincially, and refers to the provincial work-plan of sector surveys instead of requiring each health authority to survey independently to meet their own site visit deadlines.

VCH has also been piloting different modalities for delivering frequent-feedback surveys closer to the point of care, with the aim of returning timely results that clinical teams can use for quality improvement, to augment the statistical reports that we receive from point-in-time provincial surveys. In partnership with CEAN, a number of nursing units participating in Releasing Time to Care have been piloting an electronic survey tool, while other mental health units have been piloting a paper version, both based on a subset of the provincial survey tools.

What's Next For 2015/2016

The provincial work-plan is in the process of further negotiation with Accreditation Canada to ensure that all required sector surveys for BC health authorities' accreditation are reflected. To date, upcoming provincial sector surveys include:

- ❖ Emergency Department: cognitive testing of BC-customized EDCAHPS tool in progress over summer 2015; expected to go into field in fall 2015 through to spring 2016, with evaluation to follow.
- ❖ Acute Inpatient: cognitive testing of BC-customized CPES-IC tool completed in general medical/surgical, maternity, paediatrics and rehab settings. Expected to go into field simultaneously with ED survey in Fall 2015. Side-by-side testing of ED and acute care tools separately, as well as in the form of a blended tool. Evaluation will inform whether to proceed with separate tools or blended.
- ❖ Long Term Care survey: October 2015-March 2016. Phase 1 will be mail-out survey for family and frequent visitors, with all attempts made to also obtain a matched sample in Phase 2 for resident interviews, using matching tools in the InterRAI suite.
- ❖ Home Health survey: in planning.

Definition of patient experience:

“The sum of all interactions, shaped by an organization’s culture, that influence patient perceptions across the continuum of care.”

- The Beryl Institute

Human Factors

Human Factors involvement occurred on a variety of work commitments across VCH, CST, and with secondment to the BC Patient Safety and Quality Council. The work products aligned with mandated and operational priorities set forth by our Senior Executive Team, CoC leaders, and provincial requests. Some of the areas of focus include:

Formally Embedding Human Factors into Medical Device Procurement: The Western Canadian CEO Quality and Patient Safety Committee have embedded Human Factors methodologies and evaluations into a formal procurement process across the four western provinces of Canada. A Human Factors Collaborative with membership from British Columbia and Alberta was established to develop a consistent framework for equipment evaluation that requires Human Factors testing, checklists and guidance documents to provide assistance to procurement leads in engaging Human Factors expertise, defined requirements to be embedded in Request for Proposal (RFP) documents, changing the language in RFPs to enable sharing of clinical quality and safety findings in a procurement process, and standardized evaluation methodologies and tools that can be applied to maintain consistency across provinces.

This initiative continues to provide a mechanism for interprovincial collaboration across Manitoba, Saskatchewan, Alberta, and British Columbia with

with Human Factors expertise, procurement leads, quality and patient safety teams, and clinical engagement. Specifically, it has also provided our team at VCH the chance to work more collaboratively with HSSBC to ensure consistency in medical device selection and acquisitions across BC.

Teamwork and Communication in Interdisciplinary Teams: Teamwork is recognized as the core component necessary for the provision of effective and safe patient care. However, minimal multidisciplinary training occurs for interdisciplinary clinical teams. Patient care is composed of technical and non-technical elements include teamwork, communication, leadership, situational awareness, and decision-making. Through the Releasing Time to Care (RT2C) and Productive Operating Theatre (TPOT), and through secondment with the BC Patient Safety and Quality Council, teamwork and communication modules, presentations and workshops, interactive games, peer observation tools, and communication tools to assist surgical, medical, and community based teams in coaching non-technical skill development have been developed. Workshops have been conducted with medical units, ICU staff, OR teams, and NSQIP coordinators. Teamwork and communication coaching was also provided to medical leads for their Surgical Grand Rounds presentation at VGH.

Accreditation Support at Coastal: Human Factors expertise was also embedded through some of the Accreditation activities. Support in improving the Surgical Safety Checklist with a specific emphasis on the time-out phase occurred at Lion's Gate Hospital. The incorporation of interactive and educational tools developed by colleagues at HumanEra at the University Health Network was also proposed for comprehensive infusion pump training. Preliminary work and guidance were also developed and recommended for structured communication at transitions (handover).

Operational Projects Across VCH:

Many other projects involved Human Factors expertise over the year including:

- Quality and Safety observations for Endoscopy at VGH and UBCH and the integration of the Procedural Safety Checklist for Endoscopy procedures;
- Surgical Safety Checklist observations and audits across VCH;
- Trauma 6 (T6) pre-trial evaluation for trauma activations at VGH. This project included conducting a current state assessment, future state assessment, and heuristic evaluation, facilitating the clinical evaluation, and conducting a gap analysis and risk assessment on the integration of the product;
- A preliminary evaluation of the use of Omnicell carts to be integrated into anesthesiology workflow at VGH;
- Embedding Human Factors requirements into the OR Renewal Project at VGH

Clinical and Systems Transformation (CST)

Providing Human Factors Expertise to CST:

Human Factors expertise supported a variety of areas throughout the CST design and build. Clinical documentation, medication management, provider ordering workflow, guidance at advisory meetings, and system information presentation and consistency through icons, abbreviations, and symbols involved recommendations applying Human Factors principles. The evaluation and selection of medical devices (medication carts, workstations on wheels, and barcode scanning for closed loop medication) were evaluated with recommendations for Cerner implementation and integration.

Clinical & Systems Transformation (CST) is a joint undertaking between VCH, PHSA and PHC to complete a significant transformation of clinical practices and systems. Care will be streamlined, with clinical design teams creating standardized, evidence-informed clinical practices. A powerful, new integrated clinical information system will also be developed. CST is our path to smarter, safer, seamless care.

A key aim is to improve patient quality of care by making sure that our practices are evidence-based, reduce any unnecessary variations in clinical care practices, and improve communication and consistency across the clinical continuum. As VCH, PHSA, and PHC began design and the preliminary build of our electronic health record, members of our VCH Quality and Patient Safety team were active participants in the Clinical and Systems Transformation project this past year.

Working in collaboration with our colleagues in Professional Practice and Risk Management and partnering with Quality and Patient Safety colleagues at PHSA and PHC, we engaged with Advisory committees, sat on design teams, evaluated medical equipment, identified integration and implementation considerations, and advised on technical/user interface aspects of the core system.



Tissue Banking and Stem Cell Transplantation

Within VCH exists the Eye Bank of British Columbia (EBBC), BC Tissue Bank, and the Leukemia/Bone Marrow Transplant Program of BC, all of which work in conjunction with Health Canada, and other health agencies and professionals in ensuring the safety, efficacy and quality of all transplanted tissues and cellular products used in our health authority and beyond. The QPS Department supports these programs with ongoing reviews of and improvements to their Quality Management Systems.

Tissue Bank of BC

The Tissue Bank follows the model of a centralized distribution centre with strict adherence to the Regulations for the Safety of Human Cells, Tissues and Organs for Transplantation. A variety of tissues from bones to cardiac grafts are received from different manufacturers, stored and distributed to clients within VCH ensuring indefinite traceability. All tissue is obtained from suppliers that are accredited and/or registered. The Tissue Bank underwent a successful inspection by Health Canada in November 2012.

"My Wife passed away in May. I received a warm thank you letter from the Eye Bank today. She would be so pleased that she was able to donate and assist others. It brings something beautiful to a very sad time in our lives. I am a grateful bone marrow recipient. I know that those who donate, give "A gift without measure". Thank you!"

The Eye Bank of BC's team 'In Plane Sight' joined the ORBIS Plane Pull for Sight to fundraise for childhood blindness.



Eye Bank of BC - ALS Ice Bucket Challenge



The Eye Bank continually looks for ways to promote awareness like taking part in the ALS Ice Bucket Challenge, challenging other Eye Banks to follow suit.

Global BC gave a wonderful report on what the Eye Bank does behind the scenes to provide sight to British Columbians by offering families the choice to give the gift of sight.



Eye Bank of BC

The Eye Bank, which operates out of VCH, has the only comprehensive ocular program in the province that recovers over 600 donors annually and distributes tissue provincially and nationally when there is an abundance of tissue. The quality framework of the EBBC follows that of the Regulations for the Safety of Human Cells, Tissues, and Organs for Transplantation Regulations (CTO Regulations) and the Eye Bank Association of America (EBAA). The EBBC underwent both a successful re-accreditation and re-inspection by the EBAA and Health Canada in 2013.

Leukemia/Bone Marrow Transplant Program of BC

The clinical program, which resides within two health authorities (VCHA and PHSA) is responsible for the provision of care for adult patients with hematological malignancies in BC including chemotherapy and stem cell transplant.

The program has unique areas that are responsible for different processes involving: diagnosis and development of a treatment plan for referred patients, which may or may not result in a transplant; canvassing for a donor, if needed, anywhere in the world. Some patients are candidates for autologous transplants; harvesting the cellular product which can be performed by apheresis, the removal of a specific constituent of whole blood and returning the remaining to the donor, or by the surgical removal of bone marrow, mostly from pelvic bones, by using a needle. The program also collects product for other transplant centres, anywhere in the world; processing and preservation of the cellular product for future use if required; transporting the product to the transplant centre, locally or worldwide; data gathering and monitoring outcomes; innovation and research activities; and working with many partners and stakeholders.

Clinical Guidelines Initiative (CGI)

The Clinical Guidelines Initiative (CGI) was started in 2010 with the twin goals of supporting Clinical Care Management (CCM) at the provincial level and tackling system level barriers to the implementation of regional guidelines within VCH.

Clinical Care Management

The purpose of CCM is to improve the quality of patient care in BC through a well-supported system-wide approach to establishing, promoting implementation of, and report out on evidence-based clinical best practices. CGI works with CCM to provide input on the design and metrics of CCM initiatives and last year participated in developing a new framework for CCM based on learning from the first 4 years of CCM.

Speeding Up the Implementation of Regional Guidelines

Before the CST project began, CGI helped design a regional system to develop and approve paper-based regional guidelines. With the CST design now underway, CGI is focusing on how to inform the development of CST electronic order sets so that they can be effectively designed and appropriately updated. Since CST will not be ready to use for several years, CGI has worked to support the creation of bridge processes that support VCH healthcare providers to adapt the orders to a hybrid paper/electronic environment.

One bridging solution we have implemented in the last year was to collaborate with colleagues in Pharmacy & Therapeutics (P&T), IMITS, and the Regional Programs to create a new SharePoint platform for order sets. CGI updated the files to enable a search function for 1000+ order sets and transferred them to this platform. In the previous system, clinicians could not search for order sets on the VCH intranet – they had to find them alphabetically or by service. Now clinicians can search all related order sets on the SharePoint platform. This is a massive improvement in function that will help clinicians use the best possible order set to inform patient care.

CCM Includes these topics as of August 2015



Hospital Care for Seniors



Antimicrobial Stewardship



Critical Care



Heart Failure



Hand Hygiene



Surgical Site Infection



Medication Reconciliation



VTE



Sepsis



Stroke



Surgical

Visualizing Data to Engage the Hearts and Minds of Frontline Staff

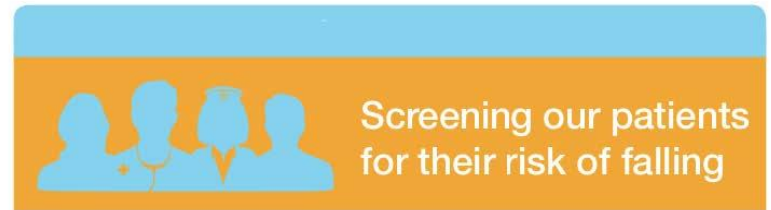
To enhance patient care, CGI is working with VCH QPS partners and Emily Carr University of Art + Design (ECUAD) to find new ways to collect and visualize unit-level quality improvement data to VCH frontline healthcare providers. The goal of this project is to encourage use of evidence-based clinical guidelines by creating templates and data displays for physicians and staff in a way that celebrates success and illustrates opportunities for improvement.



Date Display poster presentation at Quality Forum 2015: Janet Joy & Carmen Dyck

This year, CGI, QPS and the Falls Prevention Team developed a new prototype for the collection and presentation of unit-level falls data. Testing of the database and reporting functionality will begin in the fall of 2015. The intent is to transition the database and reporting to the new QPS server in 2015/16.

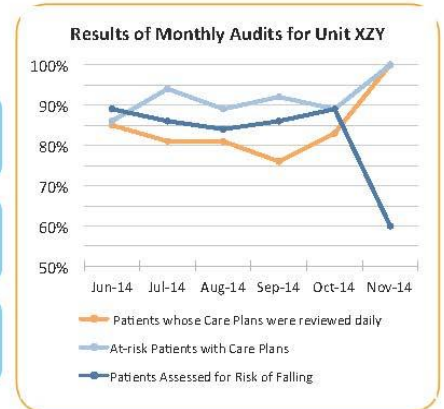
CGI is also sharing what we've learned about these innovations. With ECUAD, CGI published a chapter about this subject in the book "Information Design as Principled Action". CGI has also produced a booklet with guidelines that graphic designers can use to work on healthcare QI projects, plus we presented on this project at the 2015 Quality Forum. Feedback from stakeholders tells us that people are excited about creating new ways to collect and display QI data for the frontline!



Three Lines Of Text: Onsequia sit, nihilor mo beatur ab iduci dolorro que itatum doluptae lacabores iunt dolorion nonsed estio impore dem qui ressit et, sit offic totatquat apitaquias dolorror aut adOccatio. Eresequam, sequataqui dention rehende ntusam quid molorit arum abore, sed

January 2015

Our falls risk assessment for this month shows that:



Our plan for next year

CGI will further its work on the three initiatives mentioned above, plus we are evaluating the effectiveness of certain VCH initiatives .

48/6

48/6 is a Provincial Ministry of Health (MoH) CCM Guideline. It is an assessment/care management model that focuses on six functional care areas including:



Care areas are assessed through screening questions following which a personalized plan of care is initiated based on patient/family input. The MoH requirement is 80% or greater compliance with two metrics (screening completed and care plan initiated within 48 hours of admission) for four consecutive periods by September 2015.



“Planning together to go home better”

48/6 has been implemented at Richmond Hospital, in all of Coastal Community of Care acute sites including the Sunshine Coast and Bella Coola, and on the VGH medical units, cardiac unit, and coronary care unit. Additional accomplishments include:

- Standardizing the screening questions across VCH/PHC and working with CST to create Interdisciplinary Plans of Care (IPOCs) for each 48/6 care area.
- Ongoing Plan/Do/Study/Act cycles to revise 48/6 supporting documents based on point-of-care staff feedback.
- Integrating 48/6 with other VCH initiatives resulting in streamlining of additional VCH documents to reduce redundancies in assessment and documentation.
- Developing a Standard Operating Procedure for health record coders who perform site audits for MoH reporting; quarterly reports commenced Q4 (2014-2015).
- Partnering with Regional Education to develop a 48/6 intranet site that hosts 48/6 information and a toolkit of resources.
- Working with residential care on a “transfer” document that incorporates the 48/6 care areas to ensure critical patient information is available for acute care staff.
- Integrating 48/6 into rCare/discharge planning rounds.
- Shifting culture toward interdisciplinary documentation.
- Trialing a tool for comparing the dependency scores of patients on a VGH medical unit before 48/6 was implemented, with the dependency scores of patients on that same unit post 48/6 implementation. The Acuity/Dependency scale used to determine patients’ level of dependency is not yet a validated tool, but as shown below results clearly demonstrate an increased percentage of patients who maintained their admission level of independence or decreased in their level of dependence over the course of their acute care stay following 48/6 implementation. **This is an important 48/6 goal!**

Level of Dependency	Pre 48/6 (May/June 2014) N= 70	Post 48/6 (March/April 2015) N= 70
Increased	33%	20%
Same	48%	39%
Decreased	19%	41%
	67% same level of dependency or decreased	80% same level of dependency or decreased



Our Plan for Next Year

Complete the 48/6 implementation in VGH and UBC Hospital care units.

Meet MoH target and support sustainment.

Continue to work on care plan quality (i.e. issues raised through screening are addressed on care plan, ongoing documentation post initiation, evidence of interdisciplinary collaboration and documentation).

Finalize communication strategy for patients and families so that they understand why we are asking the screening questions, what we are doing with the information, and they feel comfortable to ask questions about their care plan.

Share more patient stories!

Define outcome measures and continue quality audits.

Ensure there is a feedback loop for staff to know how well they are doing (or not) to help inform changes to support greater success.

Continue regional review of all documents completed on admission with plan to ensure we have the correct information from patients and that we streamline the work for staff.



48/6
Safety
Huddle

“Our team is really tight and the successful rollout and implementation is attributed to all of them. They’ve gone a step further and integrated 48/6 into their daily workflow. During our daily rounds our PCC wraps up every single patient by asking if there was anything identified in 48/6.” Angel said this helps nursing stay on top of the assessments and gives the allied teams a heads up when consultations are required”.

Angel, RH



48/6 is near and dear to my heart. The strength and value in having the early discussion with patients so that we know how they were before they came to hospital cannot be underestimated. Taking that information to inform the personalized interdisciplinary care plan helps us all work off of the same page and focus on how best to care for our patients, every shift, to help them get back to their pre-hospital baseline. As one family member said, “When I saw the care plan included all of the personal bits of information I provided when my husband was admitted my mind was at ease and I knew I could go home knowing he was in good hands”.

Medication Reconciliation

Medication reconciliation is a *formal, systematic process* in which health care professionals *partner with patients* to ensure accurate and complete medication information transfer at interfaces of care. Prescribers are expected to reconcile patient/client/resident medications at admission, transfer, discharge and/or end of care utilizing the Best Possible Medication History (BPMH).

Medication reconciliation is widely recognized as an important patient safety issue and is an Accreditation Canada required organizational practice (ROP) and a BC Ministry of Health Clinical Care Management initiative. Research indicates that over 50% of patients have at least one medication discrepancy upon admission to hospital. Many medication discrepancies can potentially lead to adverse drug events.

Within VCH, we assess compliance with medication reconciliation in both acute and residential care. Specifically, we measure the percent of admissions/re-admissions where medication reconciliation was performed. The performance target for 2014/15 was 75%.

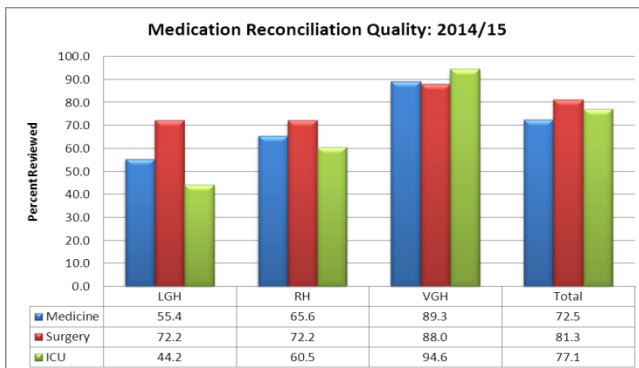
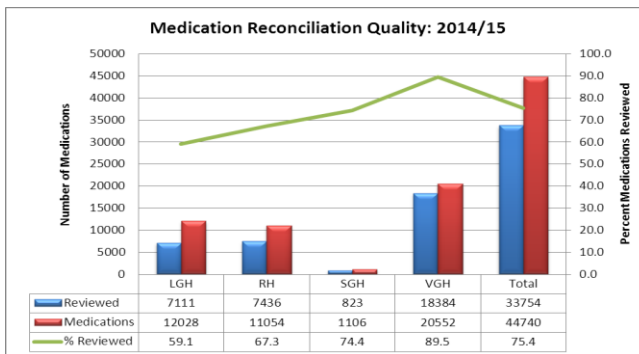
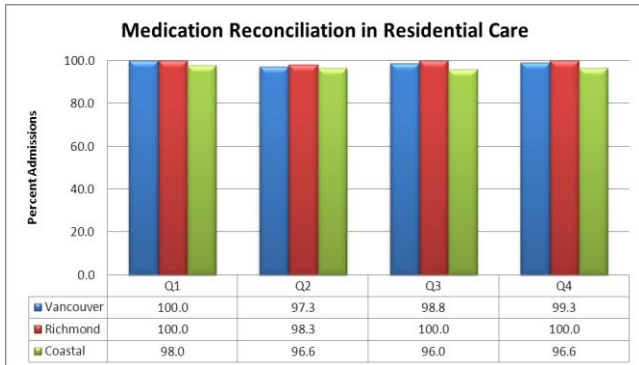
Residential Care: The data show that both overall and for each Community of Care (i.e. Vancouver, Richmond and Coastal) the percent compliance exceeds the target of 75%. The 2014/15 average percent compliance for VCH was 98%.

Quality of Medication Reconciliation Process: In addition to measuring the overall percent compliance, we continue to audit to assess the quality of the medication reconciliation process within select acute care facilities (i.e. VGH, RH, LGH and SGH). The quality audits look at the section where the medication history is verified with the patient and/or family/care provider prior to reconciling and creating admission orders. The objective of this verification process is to obtain the Best Possible Medication History (BPMH) which is the cornerstone of the medication reconciliation process.

In 2014/15 a total of 44,740 medications were counted by auditors of which 33,754 (75.4%) had been verified. The aggregate average percent verification was highest among surgical (83.3%) followed by critical care (77.1%) and medical patients (72.5%).

Medication Reconciliation program leads for each of the Communities of Care continue to work with programs to improve medication reconciliation at transitions of care as well as the “quality” of the medication reconciliation process by focusing on collection of a BPMH prior to writing admission orders.

MedRec - It's the right thing to do!

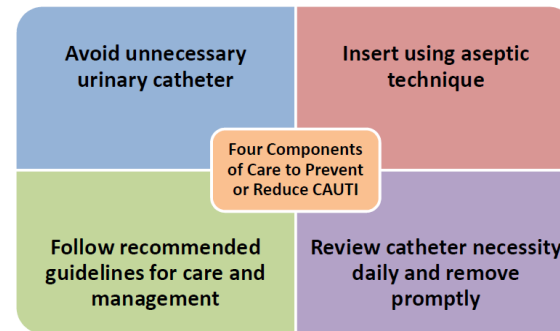


Catheter Associated UTIs (CAUTI)

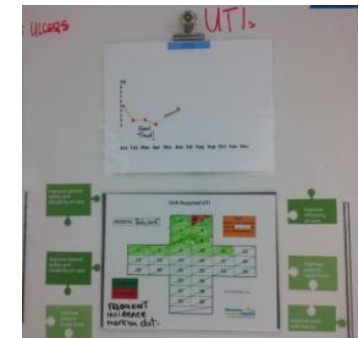
Urinary tract infections (UTIs) are the most common type of HAI accounting for more than 30% of infections reported by acute care hospitals.¹ 70 – 80% of healthcare-associated UTI's result from the placement of an indwelling urethral catheter. CAUTI have been associated with increased morbidity, mortality, hospital cost and length of stay.¹ CAUTI is the leading cause of secondary healthcare-associated bloodstream infections.³ The Regional CAUTI Steering Committee supports the CAUTI initiative across VCH through a collaborative effort between QPS and Professional Practice. VCH is committed to improving the care we provide our patients by implementing the best evidence-based practices to prevent HAI's including CAUTI. Our goal, therefore, is to provide health care workers with the knowledge and tools required to prevent and minimize harm from the use of urinary catheters.

VCH has accomplished several important milestones in the past year as this multidisciplinary collaborative effort has spread across the region. The initiative has been fully implemented at all acute care sites and GF Strong Rehabilitation Centre. Managers, educators and frontline staff have access to a comprehensive set of educational resources on the VCH intranet site as well as standardized clinical practice documents to support clinicians in preventing UTI/CAUTI.

Prevention strategies are focused on 4 key drivers:

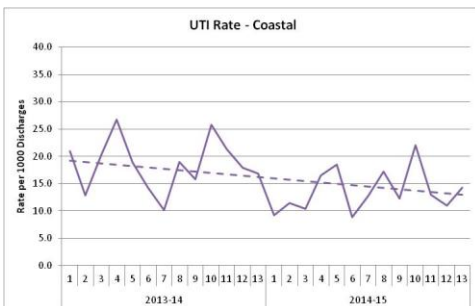
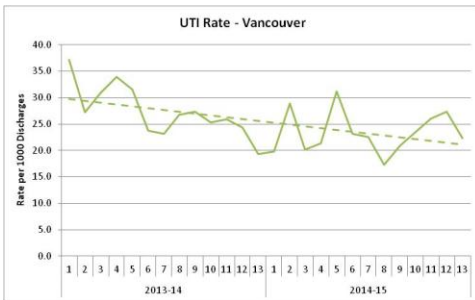
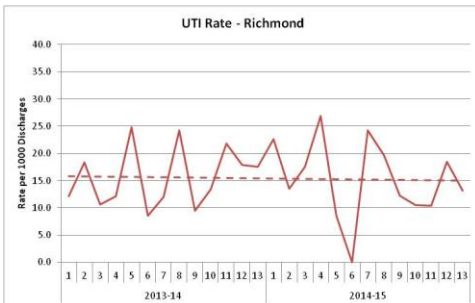
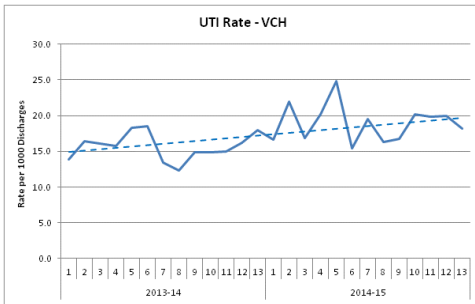


Data is critical in any effort to drive change at the frontline which is why we're integrating outcome measures data from the National Surgical Quality Improvement Program (NSQIP), Canadian Institute for Health Information (CIHI) discharge abstract data and VCH urosepsis data. Staff on many units across VCH are actively monitoring outcome and process measures related to UTI/CAUTI through Safety Crosses and Lean Improvement Lanes while IC practitioners are collaborating with unit leaders to identify new cases of UTI/CAUTI in an effort to identify local opportunities for improvement. Through regular sharing of data, individual units develop action plans and report their progress through regular monthly 'check-ins' and Quality Council reports.



Safety Cross

Last year the regional CAUTI Team had undertaken a comprehensive review of urinary catheter products working in collaboration with unit educators, clinical buyers and the vendor to develop all-in-one urinary catheter kits and introduce urinary drainage systems with a reflux valve to prevent backflow. The evaluation of the all-in-one catheter kits is currently underway as part of the provincial RFP process for non-surgical urology products. Once implemented, these new products will further standardize urinary care and support the reduction of UTI/CAUTI.



How are we doing?

VCH tracks UTI's as a proxy measure for the success of the CAUTI initiative. The annual UTI rate for VCH in 2014/15 was 18.97 per 1000 discharges. Overall, the UTI rates were highest across VCH during the baseline period of 2012/13 (31.2), declining in 2013/14 to their lowest level in P8 (12.3) consistent with the bulk of work and increased awareness surrounding UTI/CAUTI prevention. Since that time the rates have climbed back up slightly but still well below baseline and we have now reached a plateau.

Looking Forward

We've made great progress in reducing the incidence of UTI across VCH over the past 3 years but the work continues at all sites to ensure we provide the highest quality of care to our patients. One of the most important initiatives to this end is the monitoring of process and outcome measures by frontline staff on the units, which is supported through the introduction of Releasing Time to Care and Lean strategies meant to engage leadership and staff. Engaging staff in collecting data related to UTI events on individual units and facilitating discussions at unit based huddles will ensure we capture continuous improvement ideas that can only come from those caring for our patients on a daily basis. Other initiatives include; reducing the length of time a catheter is inserted by identifying and tracking patients with urinary catheters; mechanisms to notify physicians in the chart of catheter placement without a valid indication; working with our colleagues in the OR to standardize procedures that require catheter placement and removal of the catheter in the recovery room, where appropriate, prior to transfer to the inpatient unit; enhancing the available resources to include educational videos developed through Moodle to support ongoing staff education for activities such as sterile technique on insertion; and development of the urinary retention Clinical Practice Document to support staff in managing those patients who may require ongoing monitoring and evaluation for catheter placement.

“Increased education and awareness has led to a better staff understanding of how to prevent UTIs through the basics of care, such as pericare, and team discussions at unit huddles.”
Nursing staff 3N Richmond Hospital

“Through the use of our monthly newsletter, posters, and safety huddles, we were able to increase staff awareness on strategies to reduce UTIs on the unit.”
Jayne Lehn, Nurse Clinician, 6West LGH

Venous Thromboembolism (VTE) Prophylaxis

In 2011/12, VCH committed to implementing evidence based DVT/VTE prophylaxis protocols. VTE is the most preventable cause of hospital death and disability. Both hospital costs and median length of stay increases for patients who develop VTE. Long term consequences to patients of hospital acquired VTE are the risk of developing recurrent thrombotic events as well as developing chronic leg swelling. Both impact the quality of life of the patient.

VCH is ensuring that all hospitalized patients in acute care are assessed for risk of VTE, and prescribed appropriate prophylaxis (pharmacological or mechanical) as their clinical presentation indicates. In cases where a clinical indication not to prescribe VTE prophylaxis is evident, documentation in the patients' chart communicates this to other members of the healthcare team.

Measurement for compliance to this protocol is aligned with the BC Ministry of Health (MOH) Clinical Care Management Guidelines (CCM). We report our progress to the MOH every fiscal quarter and our compliance to our protocol is shared with staff and physicians through our Quality and Patient Safety portal on a monthly basis.

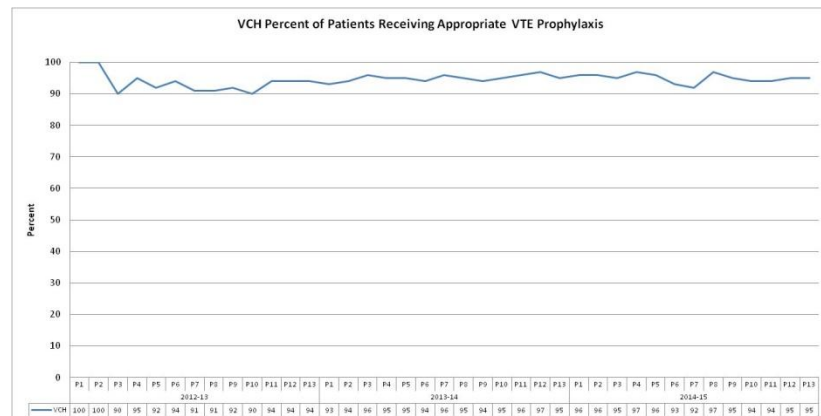
What was accomplished this year

We continued to audit on the 3 process measures (a risk assessment was completed, pre-printed orders are on the chart, and appropriate prophylaxis was ordered) each fiscal period. We were very pleased to see our compliance rate within our ICU program was 98% and sustained each period they were reported. The Ministry of Health has advised that this measure no longer needs to be reported to them; however, VCH will continue to internally monitor through the provincial ICU database.

Our compliance rates within the medicine programs have been holding steady at 92%. We have seen a slight drop in the surgical programs but overall, compliance is also above 90% on a consistent basis. There remains variability in both these programs suggesting there may be more opportunities for improvement.

What is the plan for next year

VCH is shifting the frequency of auditing and reporting for medical and surgical units who achieve compliance rates >90% for 4 consecutive periods to a quarterly auditing basis. This will allow VCH to focus on areas requiring additional support with VTE compliance, as well as on other quality indicators that require improvement, while continuing to monitor this clinical metric on a regional and facility level.



Ebola Virus Disease (EVD)

The Ebola outbreak in West Africa dominated headlines in late 2014 and early 2015. While the possibility of the virus being introduced and transmitted in Canada was small, the healthcare sector mobilized to review its preparedness. Over a few short months, guidelines and infrastructure were established both nationally and provincially.

These included:

- A public health surveillance network to screen for and follow high-risk individuals.
- Algorithms for communication and management of a suspected case.
- Detailed first responder procedures, triage guides, and laboratory protocols.
- Scenarios for the unannounced at-risk patient presenting to a healthcare facility.
- The repatriation of individuals exposed to or suspected of having Ebola.
- In-depth review of the use of personal protective equipment.
- Waste management documents.



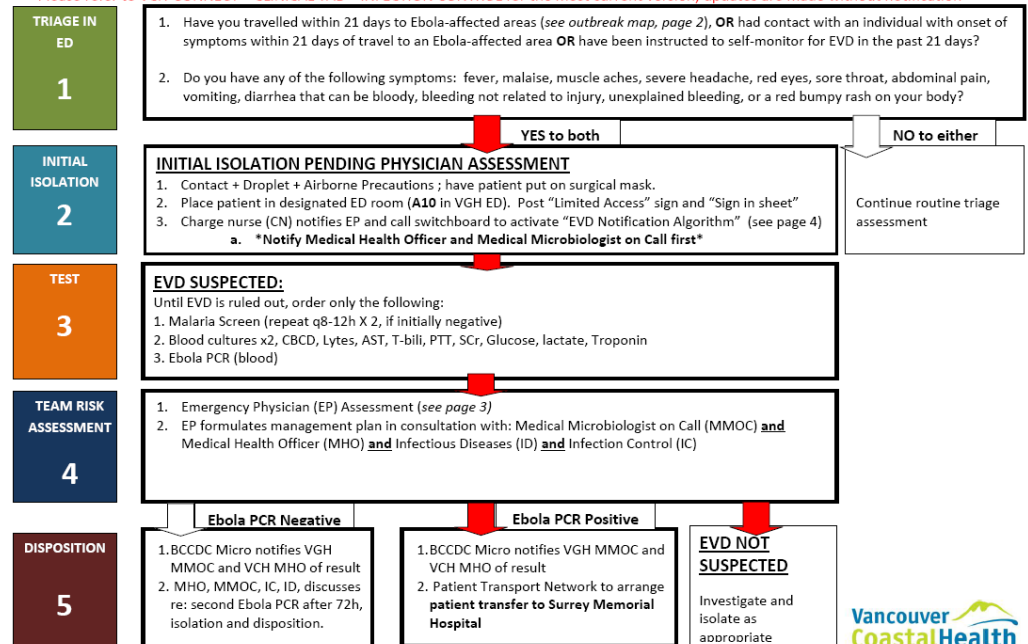
All of this required intensive cooperation and coordination across health domains and jurisdictions. While time-consuming, we hope that the new guidelines, paper exercises and mock drills have led to a more careful consideration as to how we can best protect our healthcare team while minimizing the possibility of transmission of any potential pathogen. The extensive work has led to a provincial and national update of guidelines, a provincial reserve of personal protective equipment, and an ongoing effort to improve our risk assessment tools and apply the lessons learned to other high-risk infectious diseases and/or clinical scenarios.

This was an exhaustive and prolonged effort and many of our healthcare professionals participated while still managing to provide their usual exemplary care. We would like to acknowledge and thank them for their time, commitment, *patience*, and professionalism.

V23 (2 June, 2015) Document control: VGH Infection Control; <http://vch-connect/programs/infectcontrol/Pages/default.aspx>

VGH ALGORITHM FOR ASSESSMENT OF POTENTIAL VIRAL HEMORRHAGIC FEVER, INCLUDING EBOLA VIRUS DISEASE (EVD)

Please refer to [VCH-CONNECT > CLINICAL TAB > INFECTION CONTROL](#) for the most current version; updates are made without notification



Hand Hygiene

Hand hygiene includes washing your hands with soap and water and cleaning your hands with an alcohol based hand rub. In August 2009, VCH implemented a Hand Hygiene Policy that requires all healthcare providers including physicians, contracted employees and students to **perform hand hygiene before and after touching the patient and/or their environment**. Hand hygiene is universally accepted as the single most important method of infection prevention and control.

Hand hygiene compliance is measured using the Canadian Patient Safety Institute (CPSI) audit tool. Each acute care ward/unit is audited at least once per month by independent observers trained in performing hand hygiene audits. Inter-rater reliability (which measures whether auditors agree in their assessment) is assessed periodically to ensure that auditing is performed consistently.

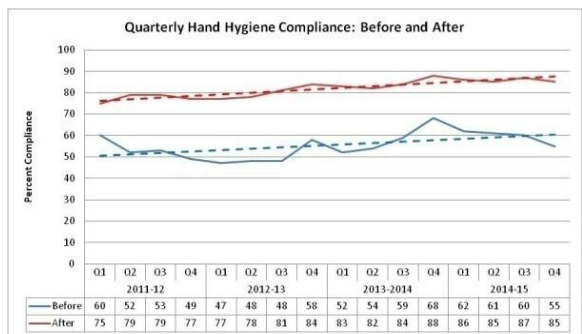
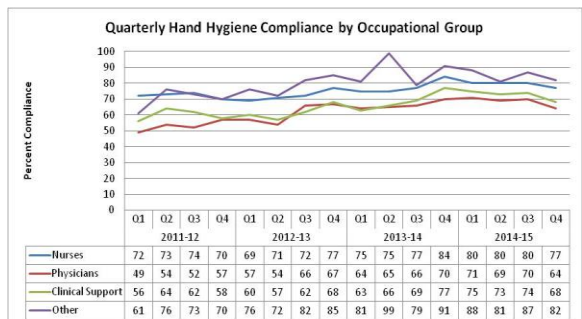
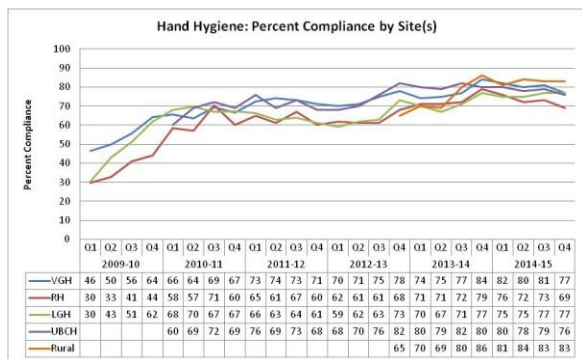
Long-term/Residential care hand hygiene compliance is also measured using the CPSI audit tool. Each facility is audited at least once per month using peer auditors, trained by the Regional Hand Hygiene Coordinator.

The VCH annual target for hand hygiene compliance is 100% in non-emergency situations – a goal that will significantly reduce the transmission of infection. Our overall annual percentage compliance this fiscal year improved to 78% from 76% in 2013/14.

Provincial reporting on hand hygiene compliance started in 2011/12. Each health Authority submits their hand hygiene data to PICNet on a quarterly basis for provincial reporting. The provincial percentage overall compliance for 2014/15 was 82.5%, slightly higher than VCH (78%). Due to variation in auditing and methodology between health authorities and between facilities (i.e. auditing may be performed by auditors who work in the same unit or small facility as the healthcare providers they are observing (self-auditing) or may be performed by external auditors. PICNet does not recommend making direct comparisons between health authorities and facilities.

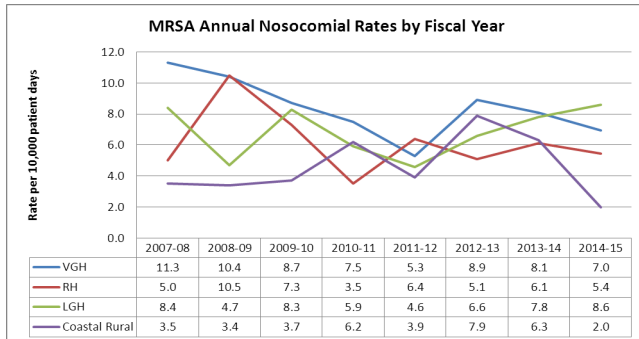
Over the 2014/15 fiscal year hand hygiene auditors again focused on targeted “in the moment” feedback, both negative and positive to all staff, with extra attention given to the lower performing units. VCH continues to be an active member of the Provincial Hand Hygiene Working Group; participate in World Hand Hygiene Day; celebrate staff who are “Caught Clean Handed”; and unfortunately were dethroned as winners of the Clean Shots contest this year by Interior Health (but with honorable mention in the “most creative” category).

In 2015/16 VCH will undergo a refresh of all of our hand hygiene promotional and educational material.



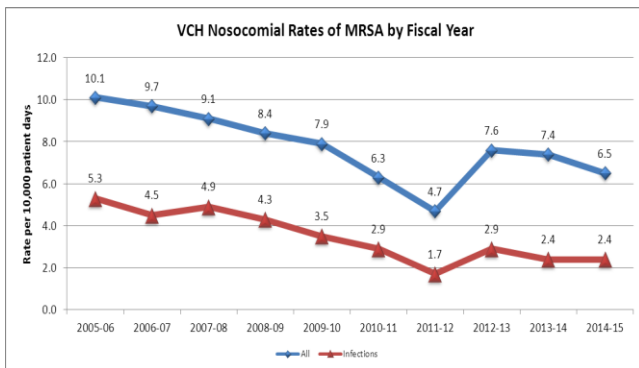
Methicillin-resistant *Staphylococcus aureus* (MRSA) Incidence Rate

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a strain of *Staphylococcus aureus* (*S. aureus*) bacterium that is resistant to a number of antibiotics. *S. aureus* normally lives on human skin and in the noses of about 25% of the general population (i.e. colonization). However, *S. aureus* can cause skin infections and more serious diseases such as bloodstream and respiratory infections.



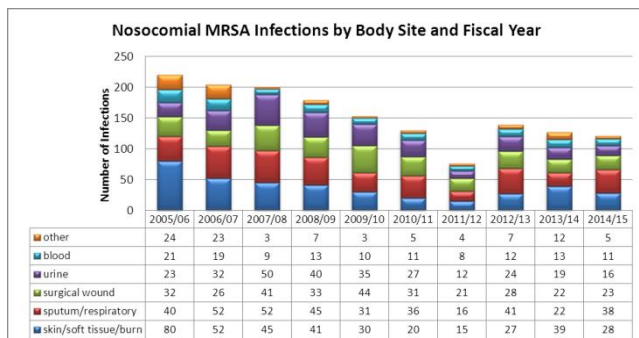
The MRSA incidence rate measures the rate of newly identified cases of MRSA among hospitalized patients considered to be due to a stay within a VCH hospital. Measuring the incidence of MRSA and the locations in facilities where it occurs allows us to identify potential sources and target our interventions.

Our annual target for 2014/15 was to decrease our nosocomial rate by 12% for an annual regional rate of 6.5 per 10,000 patient days. We achieved an overall rate of 6.5 (95% CI = 5.8 – 7.3) which is consistent with our target. Our rate of infections has remained stable at 2.4. Compared to last year we have achieved 16% and 28% reductions in our skin/soft tissue/burn and urine associated infections, respectively. Unfortunately, we observed a 72% increase in sputum/respiratory associated infections.



Over the 2014/15 fiscal year there was a total of 713 cases of MRSA identified among admitted patients. Of these 578 (81.1%) were healthcare associated, 90 (12.6%) community acquired and 31 (5.4%) of unknown origin. Of the 578 healthcare associated cases, 305 (52.8%) were acquired within a VCH hospital, 242 (41.9%) from another healthcare facility and 31 (5.4%) were associated with another healthcare exposure (e.g., outpatient treatment).

We continue our emphasis on improving hand hygiene compliance and enhanced cleaning of environmental surfaces and mobile equipment. We have targeted the increase in respiratory associated infections by emphasizing the ICOUGH program. ICOUGH is an acronym which reminds patients and staff on practices to reduce the risk of experiencing respiratory complications following surgery.



- Breathe **I**n and hold for 3 seconds (every 30 minutes)
- **C**ough and deep breathing (every 30 minutes)
- **O**ral care (3 times daily)
- **U**p (have head of bed up)
- **G**et moving
- **H**ave a conversation (talk to your healthcare team about pneumonia prevention)

Clostridium difficile Infection (CDI) Incidence Rate

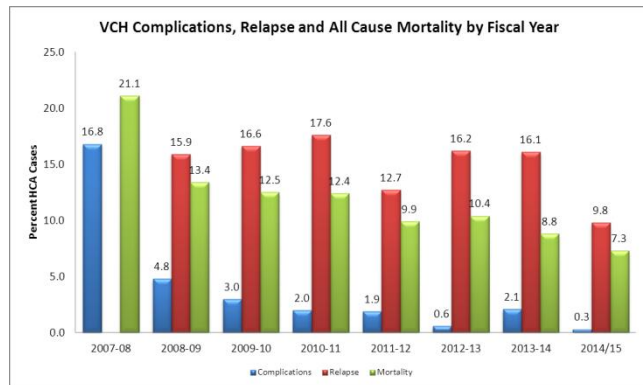
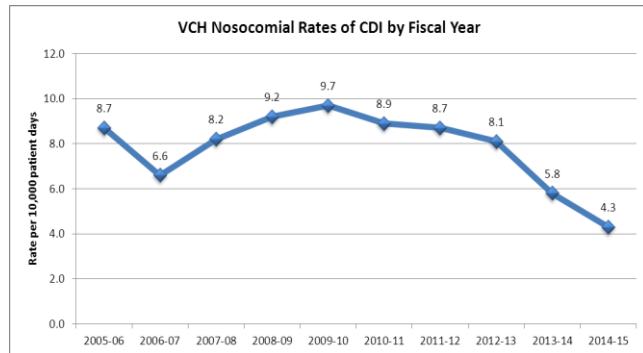
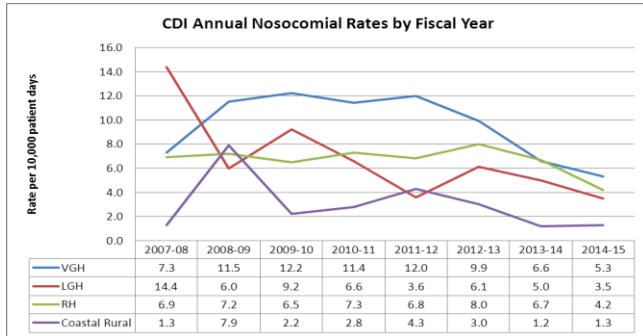
Clostridium difficile is a bacterium that can cause infections of the gastrointestinal system. *Clostridium difficile* infection (CDI) happens when antibiotics kill the good bacteria in the gut and allow *Clostridium difficile* to grow and produce toxins that can damage the bowel. CDI can cause infections ranging from diarrhea to rare but serious complications.

The CDI incidence rate measures the incidence of CDI infections among hospitalized patients considered to be due to a stay within a VCH hospital. All patients diagnosed with CDI are followed for 30 days or up until discharge/transfer for complications (i.e., toxic megacolon, total or partial colectomy, bowel perforation, gastrointestinal bleed and secondary bacteremia). Measuring the incidence of CDI and the locations in facilities where it occurs allows us to identify potential sources and target our interventions.

Our annual target for 2014/15 was to decrease our nosocomial rate by 10% for an annual regional rate of 5.2 per 10,000 patient days. We achieved an overall rate of 4.3 (95% CI = 3.8 – 5.0) which is well below our target. Our relapses, complications and all-cause mortality are the lowest they have ever been. Compared to last year we achieved 86%, 39% and 17% reductions in relapses, complications and all cause mortality, respectively.

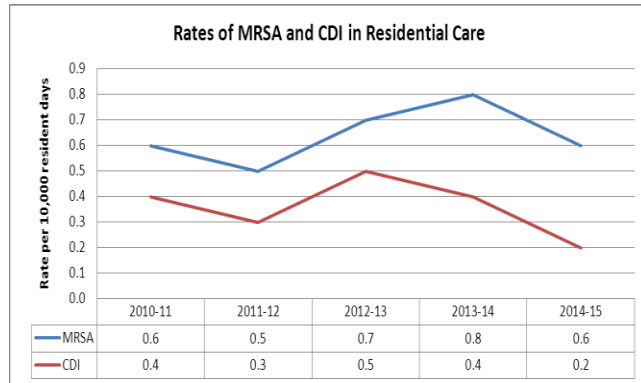
Over the 2014/15 fiscal year there was a total of 434 cases of CDI identified among admitted patients. Of these 286 (65.9%) were healthcare associated, 146 (33.6%) community acquired and 2 (0.5%) of unknown origin. Of the 286 healthcare associated cases, 218 (76.2%) were acquired within a VCH hospital and 68 (23.1%) from another healthcare facility and 2 (0.7%) were associated with another healthcare exposure (e.g., outpatient treatment).

We attribute the significant downward trend in CDI to our enhanced surface and mobile cleaning program, the use of ultraviolet C light disinfection technology and our ongoing antimicrobial stewardship program that identifies unnecessary and inappropriate antibiotic use. Antibiotics are a risk factor for the development of CDI and anything we can do to limit inappropriate use is an important preventative measure for this infection. Ultraviolet C disinfection is used to complement specialized isolation discharge cleaning and reduce the chance of resistant bacteria remaining after cleaning.



MRSA and CDI in Residential Care

There is no standardized provincial or national surveillance for MRSA or CDI in residential care. Screening of residents for MRSA at the time of admission to the facility is not performed consequently cases are identified if specimens are tested in the medical microbiology laboratory for clinical reasons and/or the resident was admitted to acute care and was screened on admission. Cases of CDI are identified from testing symptomatic residents.



MRSA: In total there were 30 cases of MRSA identified among residents in 2014/15 for a rate of 0.6 per 10,000 resident days compared to 58 in 2013/14 for a rate of 0.8.

Of the 43 MRSA cases 13 or 30.2% represented infections. This is down from last year where 55.2% were infections.

CDI: A total of 17 CDI cases were identified among residents for a rate of 0.2 per 10,000 resident days compared to 27 in 2013/14 for a rate of 0.4.

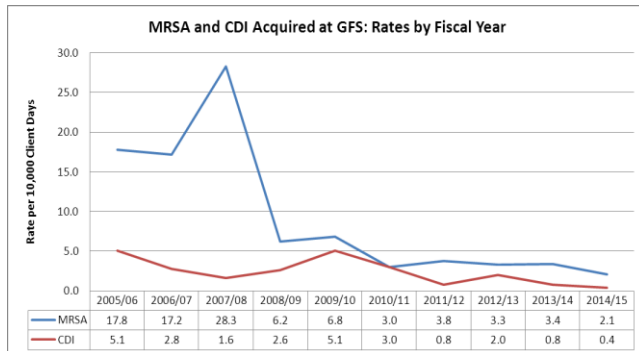
Of the 17 CDI cases 3 or 17.6% represented relapses. This is down from last year where 22.2% were relapses.

VCH has 15 directly-funded facilities that provide residential care services to clients across the region. In total there are 1760 directly-funded residential care beds. The table shows each of the facilities along with its location and the number of beds.

Residential Care Facility	Location	Number Beds
Banfield Pavilion	Vancouver	156
Bella Coola General Hospital	Bella Coola	5
Cedar View Lodge	North Shore	89
Dogwood Lodge	Vancouver	113
Evergreen Extended Care	Powell River	74
Evergreen House	North Shore	288
George Pearson Centre	Vancouver	120
Hilltop House	Squamish	79
Kiwanis Care Centre	North Shore	192
Minoru Residence	Richmond	250
Olive Devaud Residence	Powell River	81
Purdy Pavilion	Vancouver	199
RW Large Memorial Hospital	Bella Bella	6
Shornecliffe	Sechelt	59
Totem Lodge	Sechelt	49

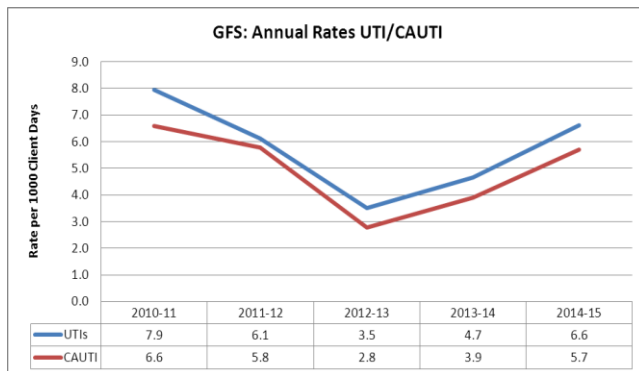
GF Strong Rehabilitation Centre

GF Strong is British Columbia's largest rehabilitation centre with 68 beds serving residents of BC and the Yukon. GF Strong provides inpatient, outpatient, outreach and clinical support services to in four unique programs: Acquired Brain Injury (ABI), Spinal Cord Injury (SCI), Neuromusculoskeletal and Arthritis (NMA) and Adolescent and Young Adult (with congenital abnormalities).

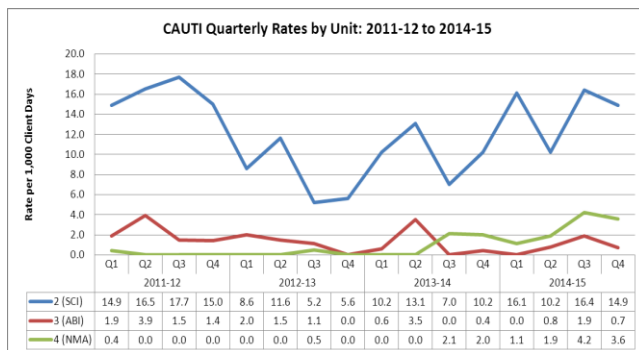


The surveillance program at GF Strong includes methicillin-resistant *Staphylococcus aureus* (MRSA), *Clostridium difficile* infection (CDI), highly resistant gram negative bacilli (GNB) as well as urinary tract infections (UTIs) and catheter-associated urinary tract infections (CAUTI). VCH acute care admission screening was introduced at GF Strong in October 2011 which means that at risk clients are now screened for MRSA and GNB. Surveillance UTIs and CAUTIs was initiated in April 2010.

The rates for MRSA and CDI continue to be very low with a rate of 2.1 per 10,000 client days (95% CI = 0.7 – 4.9) for MRSA and 0.4 (95% CI = 0.0 – 2.3) for CDI. There were no cases of highly resistant GNB identified. Both UTI and CAUTI rates have increased for a second year. In 2014/15 a total of 159 episodes of UTI were identified among clients of which 137 were CAUTI compared to 111 UTIs and 93 CAUTIs the year prior representing a 43% and 47% increase in cases, respectively. The annual incidence rate was 6.6 per 1000 client days (95% CI = 5.6 – 7.7) for UTIs and 5.7 (95% CI = 4.8 – 6.7) for CAUTIs.

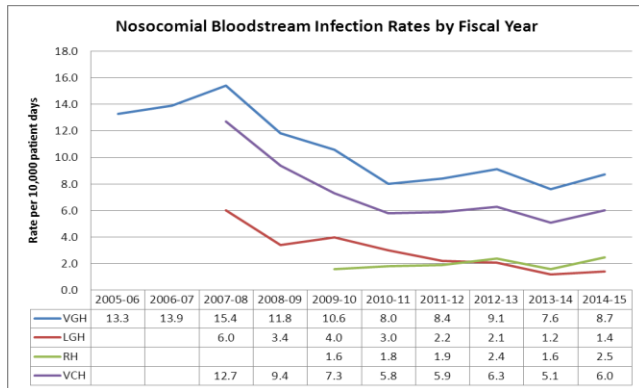


Clients on the spinal cord injury unit are much more likely to be catheterized for extended periods of time and consequently have a higher risk of CAUTI than other clients at GF Strong. The quarterly rates by unit graph shows that the rate of CAUTI among SCI clients has been increasing over the last two years. The observed increase on the NM unit is hypothesized to be associated with an improvement in the culturing of clients and subsequent identification of microorganisms. UTI and CAUTI rates on the ABI unit remain consistently low.

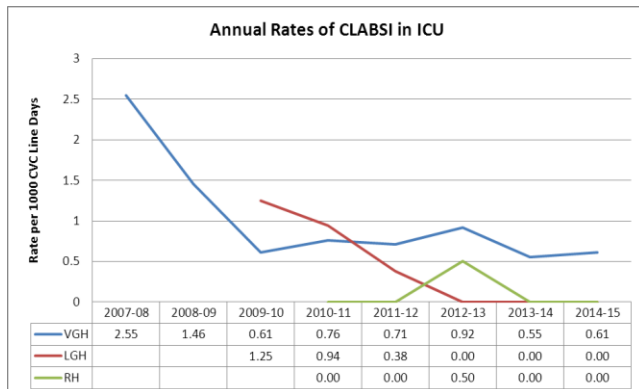


Regional initiatives to prevent CAUTI continue at GF Strong. Please refer to the CAUTI section of the report for details.

Bloodstream Infection (BSI) Incidence Rate



The overall nosocomial BSI rates for all three participating hospitals increased in 2014/15.



The rates for central line associated blood stream infections (CLABSI) among ICU patients remains low. There were no cases acquired at LGH or RH in the last two years.

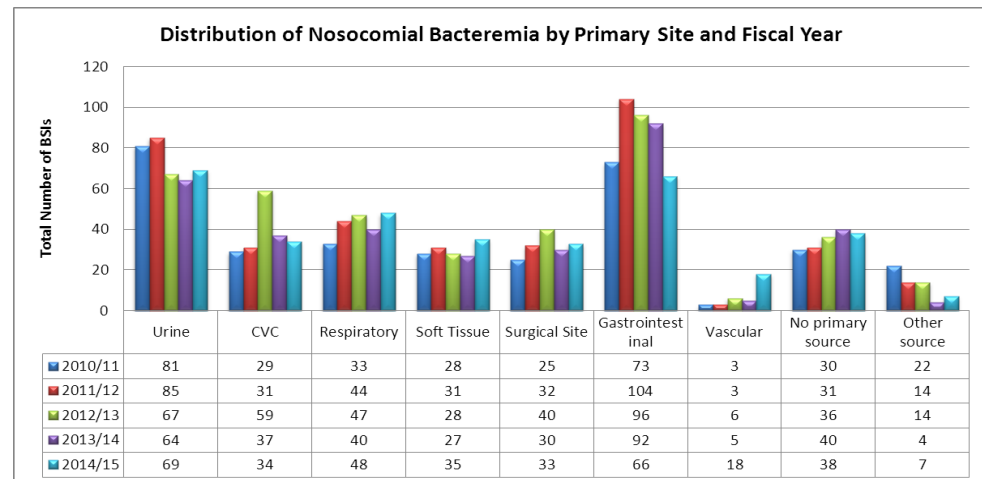
Bloodstream infections (BSI) occur when bacteremia enter the bloodstream. Bacteremia may enter the bloodstream through a wound, surgery or other invasive procedure or as a consequence of a pre-existing disease. Measuring the incidence of BSI, the source of infection as well as the locations in facilities where it occurs allows IPAC to identify potential sources of the responsible organisms and target interventions accordingly.

Comprehensive BSI surveillance is performed at Vancouver General Hospital (VGH), Richmond Hospital (RH) and Lions Gate Hospital (LGH). The focus of the surveillance is on bacteremias acquired as a result of a healthcare encounter or hospital/healthcare facility stay. Cases acquired in the community are not included in the surveillance.

For 2014/15 there were 628 healthcare-related BSI cases of which 348 (55.4%) were nosocomial (of these 66 were from GI sources). BSIs associated with GI sources are excluded from our rate calculations as they are often due to pre-existing disease such as inflammatory bowel disease and not the result of the patient's stay in hospital.

Our goal for 2014/15 was to reduce our 2013/14 rate by 10% for a target of 4.6 per 10,000 patient days. Unfortunately, our rate increased this year to 6.0 (95% CI = 5.3 – 6.7) from 5.1 (95% CI = 4.5 – 5.8).

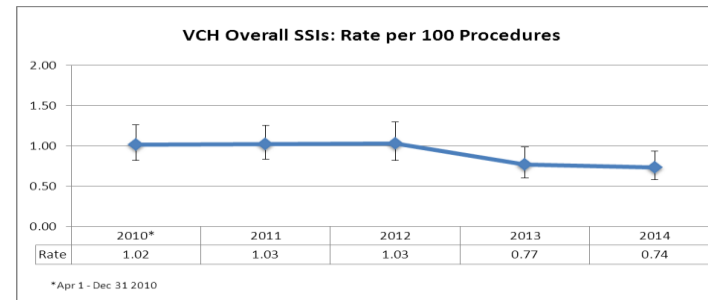
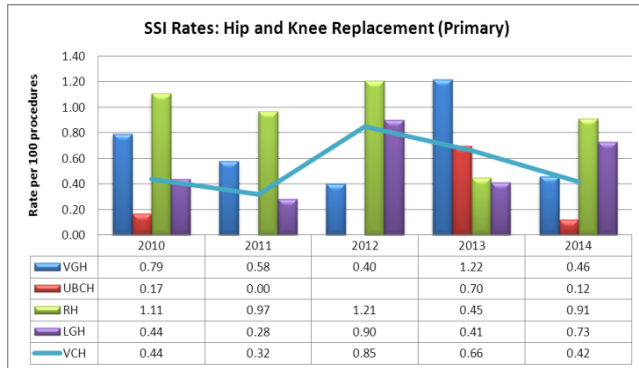
Bacteremias associated with urinary tract infections account for the majority of the nosocomial bacteremias identified. In 2014/15 we observed an increase in vascular-associated bacteremias which was investigated. Bacteremias are followed closely and trends monitored on the clinical units with immediate feedback to staff as appropriate.



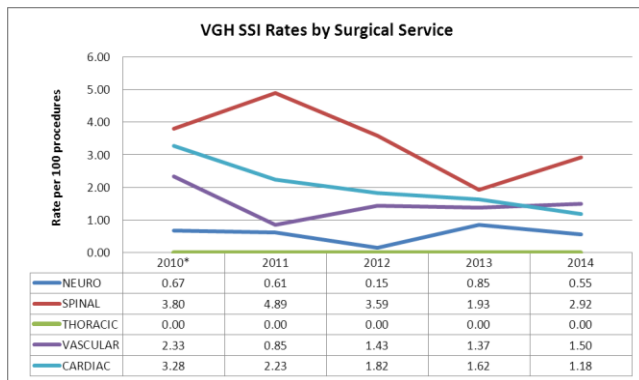
Surgical Site Infection (SSI) Rate

A surgical site infection (SSI) is an infection of the tissue in and around a surgical wound. To be considered a SSI the infection must occur within a designated time following surgery. A SSI is a potential major complication after surgery leading to a longer hospital stay, prolonged recovery, higher costs and patient dissatisfaction.

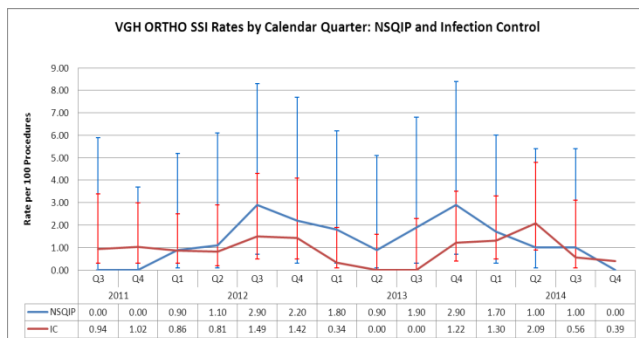
Measuring the incidence of SSIs is an important measure of surgical quality. It allows IPAC to identify potential infection-related sources and work collaboratively with surgeons and our National Surgical Quality Improvement Program (NSQIP) team to reduce the risk of infection to patients. Using internationally-accepted standard definitions (CDC/NHSN 2014) we perform surveillance on targeted orthopedic, spinal, vascular, thoracic and neurosurgical procedures.



In 2014, a total of 8964 targeted procedures were performed in VCH hospitals, of which 66 developed a SSI for a rate of 0.74 per 100 procedures. This rate is slightly lower than 2013 (0.77). Four VCH hospitals perform total hip and knee (primary) replacements. Combined the four hospitals performed 3317 total hip and knee replacements in 2014 of which 14 developed a SSI for an overall rate of 0.42 per 100 procedures. This is down from 0.66 in 2013.



In addition to orthopedics, Vancouver General Hospital (VGH) performed surveillance on 3050 targeted spinal, vascular, thoracic and neurosurgical procedures. Of these, 37 developed a SSI for an overall rate of 1.21 per 100 procedures. Rates have remained stable or declined for all services with the exception of spinal which saw an increase in 2014 following declining rates for the two years prior. The increase in the spinal service was investigated and addressed. There have been no SSIs associated with thoracic procedures.



Over the last year we have been working with our NSQIP team to compare our SSI rates and develop combined surgical quality reports for our surgical teams. The results for VGH orthopedics demonstrates the concordance between the two programs despite the differences in approach. Please refer to the NSQIP section of the report for more details.

Laboratory Confirmed Influenza

Influenza (commonly referred to as the flu) is an infectious respiratory illness caused by influenza viruses. Influenza is transmitted through the air by coughs or sneezes which create aerosols containing the virus. Influenza can also be transmitted by direct contact with nasal secretions or contact with contaminated surfaces. Through frequently confused with the common cold, influenza is severe and remains a significant cause of morbidity, mortality and hospital costs during influenza season.

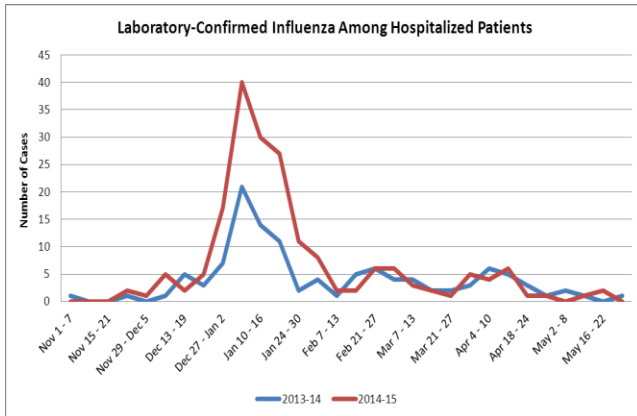
Surveillance for laboratory-confirmed influenza among hospitalized adults (i.e. 16 years old or greater) is performed in all acute care facilities and runs from November 1st to May 31st every year.

This past year we experienced a particularly challenging influenza season in 2014/15 compared to 2013/14 due to a mismatch between the influenza vaccine and the virus strains circulating in the community which led to reduced vaccine effectiveness.

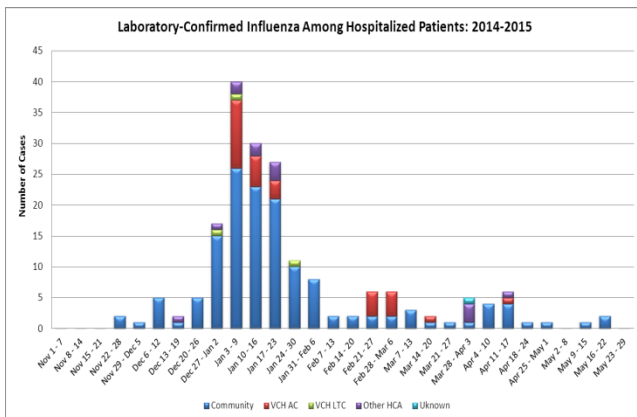
There were 190 cases of laboratory-confirmed influenza identified among hospitalized patients in 2014/15 compared to 114 last fiscal year. The vast majority were community acquired (N = 144; 75.8%). A total of 45 (23.7%) cases were healthcare associated of which 29 (15.2%) were acquired in a VCH hospital (VCH AC) and three (1.6%) were acquired in a VCH directly funded long term care facility (VCH LTC). One case was of unknown origin.

The **Patient Vaccination Program** at VGH and GF Strong provides influenza and pneumococcal vaccination to patients. It is a model that achieves compliance with hospital accreditation requirements and with the Public Health Agency of Canada's recommendation to vaccinate high risk patients that are being discharged from hospital.

The provincial **Healthcare Worker Flu Policy** requires that all healthcare workers, physicians as well as other staff including administration and volunteers working in publicly funded healthcare facilities get vaccinated against influenza or wear surgical mask when in areas where patient contact may be expected. The policy is aimed at protecting patients and residents of residential care facilities as well as reducing illness among healthcare workers.



Although the 2014/15 influenza season followed a similar trend as in 2013/14 there were many more hospitalizations of adults with laboratory-confirmed influenza in 2014/15.



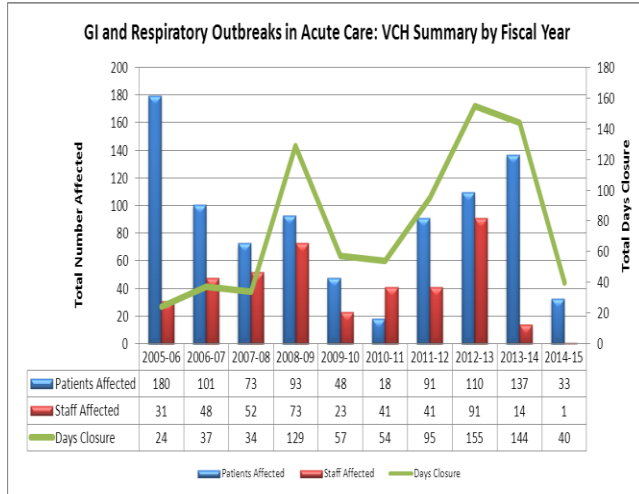
Outbreak Management

Control and management of respiratory and gastrointestinal illness (GI) is a key role of Infection Prevention and Control (IPAC) team. Hospitalized patients and residents of residential care facilities are at increased risk for such illnesses due to pre-existing medical conditions and advanced age. Early identification, management and containment of these illnesses requires a multidisciplinary team effort to prevent transmission to patients, residents and staff.

This past year was challenging as there was a mismatch between the influenza vaccine and the viruses circulating in the community resulting in reduced vaccine effectiveness leading to an increased number of influenza-associated outbreaks (i.e. respiratory).

In 2014/15 there was a total of 23 outbreaks in VCH acute (AC) and long term care (LTC) facilities. Of these five were in AC (3 respiratory and 2 GI) and 18 (14 respiratory and 4 GI) in LTC. A total of 199 patients/residents were affected (33 AC and 166 LTC) and 18 staff (1 AC and 17 LTC). The total days closure of affected areas was 150 days of which 110 days were associated with outbreaks in LTC and 40 in AC.

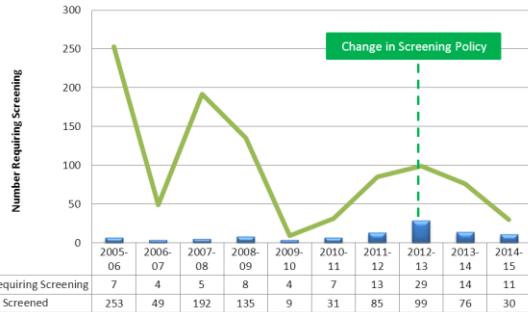
A comparison of the viral gastrointestinal outbreaks over the last seven years shows that in 2014/15 we experienced the fewest GI outbreaks (N = 6), had the lowest overall average days closure at 8.2 days and had the lowest average patients/residents (7.5) as well as staff affected (0.7) affected. It is hypothesized that the very low number of GI outbreaks was a result of concerted pre-emptory educational sessions, an emphasis on no food sharing going into the GI season and most importantly the development of in-house technology that allowed for immediate identification of norovirus.



GI Outbreak Indicator	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
# GI Outbreaks	23	12	13	21	28	16	6
# GI Outbreaks LTC	12	4	8	8	11	7	4
# GI Outbreaks AC	11	8	5	13	17	9	2
Average Total Days closed	9.4	17.7	10.1	10.0	11.0	9.0	8.2
Average LTC Days closed	10.5	41.3	12.3	13.3	13.8	10.3	8.0
Average AC Days closed	8.3	7.1	10.8	7.8	9.1	8.0	8.5
Average # pts/residents affected	11.8	8.8	7.7	12.4	9.5	8.6	7.5
Average # LTC residents affected	16.6	14.5	24.8	25.0	14.2	9.6	7.0
Average # AC patients affected	7.0	6.0	3.6	8.6	6.5	7.8	8.5
Average # staff affected	9.9	3.9	7.2	4.8	5.9	0.9	0.7
Average # LTC staff affected	14.2	6.0	8.4	8.4	6.6	0.6	0.8
Average # AC staff affected	5.5	2.9	8.2	4.1	5.4	1.1	0.5

Mycobacterium tuberculosis (MTB)

M.Tuberculosis in Acute Care: TB Cases Requiring Screening for Patient Exposure by Fiscal Year



In 2014/15 a total of 26 MTB cases were identified of which 11 (42.3%) required patient screening for exposure. A total of 30 exposed patients were screened. This compares to 40 cases identified in 2013/14 of which 14 (35%) required patient screening and 76 exposed patients screened.

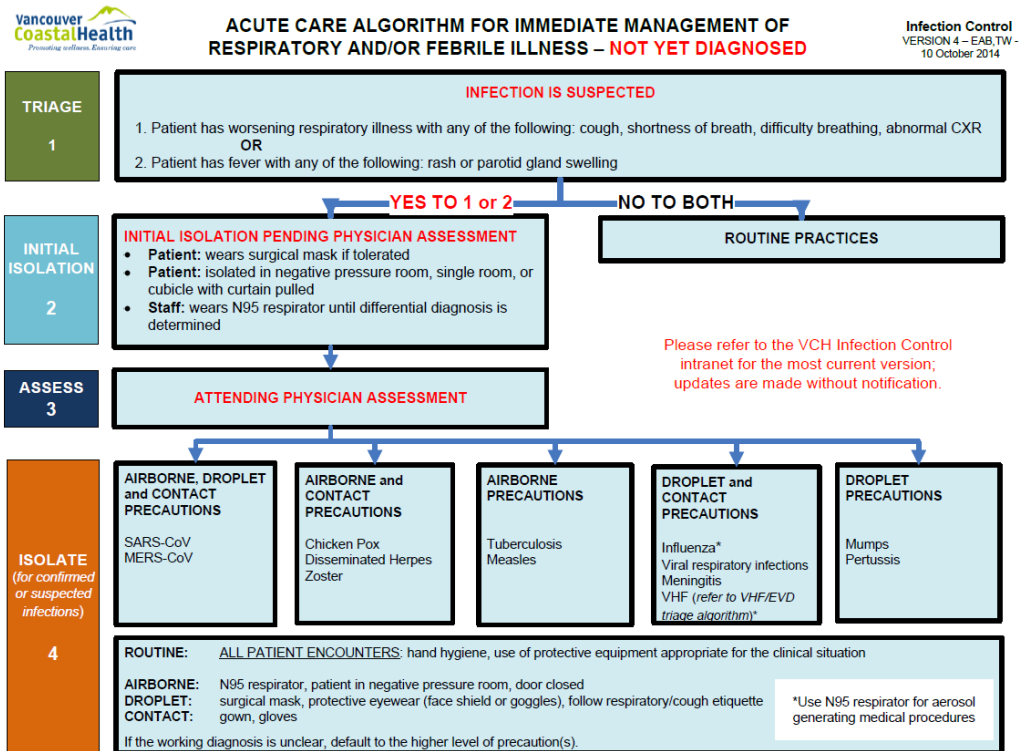
Compared to 2013/14 there has been a 65% reduction in the number of patients that needed to be screened as a result of exposure to a MTB case. This is especially noteworthy given the change in screening policy in 2012/13 where patients exposed to cases that are smear negative but turn out to be culture positive are now screened.

It is important to note that some cases of MTB are identified in patients who have no apparent symptoms and therefore would not have met the criteria for isolation and enhanced precautions with the respiratory algorithm.

Tuberculosis is a disease caused by the bacterium called *Mycobacterium tuberculosis* (MTB). The bacterium usually attacks the lungs. Tuberculosis is spread through the air from person to person.

Cases of MTB that are not promptly identified can have a significant impact on the hospital resulting in the screening of many other patients and hospital staff that may have been exposed to the patient with MTB. All VCH acute care facilities use the following algorithm for the immediate management of patients with undiagnosed respiratory and/or febrile illness. The aim of the protocol is to quickly identify at-risk patients for isolation to prevent potential transmission to other patients and/or staff.

We monitor the number of MTB cases identified in hospital that required patient screening for exposure.



References: PHAC, http://publications.gc.ca/collections/collection_2013/resp-phac/HP40-83-2013-eng.pdf accessed 24 Sept 2014
CDC HICPAC, <http://www.cdc.gov/hicpac/pdf/isolation/isolation2007.pdf> accessed 11 September 2014



As caring health professionals, our team strives to foster a calm healing and respectful environment that is safe and equal for all. We value opinions, encourage idea sharing and support our colleagues in our collective quest to deliver person and family centered care that is holistic and best practice.