

**POSTER PRESENTATIONS  
ST. JOHN'S CONVENTION CENTRE**

**WEDNESDAY, MAY 13, 2009  
10:10 AM – 10:50 AM**

**See Final Program for Poster Board Numbers**

**Process and Feedback Enhances the Completion of Admission Screening Swabs**

Sabrina Mastronardi, Karina Michelle Ramirez, Sheena Schuck, Allison McGeer  
*Mount Sinai Hospital, Toronto, Ontario, Canada*

**Background:** Expert bodies recommend that patients at high-risk of colonization/infection with antibiotic resistant organisms (AROs) be screened. Early identification of ARO colonized patients leads to fewer patients exposed to AROs, and reduced requirements for additional precautions. Mount Sinai Hospital policy (since 1996) is to screen all medical and surgical admissions with ARO risk factors. Compliance for completing admission swabs has been inconsistent. A process to audit the number of swabs completed within 24hrs was developed.

**Project:** An audit process was developed to measure the proportion of at-risk patients admitted to each nursing unit who had admission swabs submitted within 24hrs. Process expectations are that patients admitted through the emergency department (ED) have admission swabs completed prior to transfer to an inpatient unit.

**Results:** Audits are performed for one week each month beginning February 2008. Monthly graphic feedback provided to nursing management and the information shared with front line staff; based on discussions with users, feedback was improved in September. An average of 114 sets of admission swabs were collected per week. The percent of swabs obtained in the ED was 29% (17/59) in February 2008 and increased steadily to 57% (37/65) in December 2008. The number of swabs completed within 24hrs of admission increased from 63% in September 2008 to 69% in December 2008.

**Lessons Learned:** Monthly feedback to staff regarding admission swab rates has helped to increase compliance. These results have also helped to decrease the number of patients exposed to patients colonized with AROs.

**An innovative approach to monitoring 30-day post-op SSI Rates**

Beverly Pittman, Kerry Decker; *Labrador Grenfell Health, St. Anthony, Canada*

Hospital, located in St Anthony, NL, fully accredited providing acute-care services to the people of Northern Peninsula, southern Labrador, and the Quebec Lower North Shore. Performs a variety of surgeries. From May 2007 to March 2008, a total of 2756 surgical cases (1923 outpatient surgeries and 833 inpatient surgeries) were performed.

In January 2008, a Safer Healthcare Now! team was developed. Core team members represent nursing unit coordinators, day surgery nurse, infection control/risk manager, and community/homecare nurse. Ad-hoc members include nursing site manager, pharmacist, surgeon, and anaesthetist.

One of our main challenges was to obtain good 30-day post-op infection rate data. The infection control nurse and a community home care nurse partnered to develop a process and questionnaire for a 30-day follow-up.

After 30 days the community home care nurse contacts the patient and completes the screening questionnaire. Patients are very welcoming and appreciate that we take the time to follow-up on their surgery. If there is an indication of infection, the ICP pulls the chart and begins an in-depth review of the client's record and determines if there is a probable SSI infection.

We are progressing well at improving the care components of timely initiation and discontinuation of antibiotics and maintaining normothermia. In servicing staff, talking it up in the clinical areas, and posting our data on SSI prevention has gained the attention and commitment of staff to improve SSI care.

We are pleased with our work to date and open to learn from and share with our colleagues across the region and country.

## **NEED TO EMPHASIZE ON COMMUNITY REACHOUT TO THE RURAL PEOPLE IN DEVELOPING COUNTRIES ABOUT HIV/AIDS].**

Kehinde Adesoye; ARFH, Ibadan, Nigeria

**Background/ Objectives:** HIV/Aids as number one deadly infectious disease known today, has drawn global attention on various issues concerning its cause, how it is contacted, symptoms, prevention etc. Actually there has been a lot of advocacy, education, enlightenment on the disease but the target is mostly on the urban dwellers and minimal number of rural dwellers have access to this information. A project to enlighten rural people on Hiv/aids was carried out in two rural settlements called Eleshin Funfun and Agbeye in Osun State. **Methods:** Questionnaire method of research was used and numbers of volunteers were interviewed on their awareness on Hiv/Aids. 500 volunteers were interviewed from each settlement including their prominent leaders in the society. **Results:** A total of 1000 volunteers were interviewed. Only 27% of them are aware of HIV/Aids while 11% know few prevention methods and these are communities where having multiple sexual partners is rampant and even extra marital affairs is allowed. **Conclusions:** It is observed that rural people don't have enough awareness on Hiv/Aids in developing countries. This is because electronic media like radio and television are mostly used in disseminating information about Hiv/Aids in Africa and rural dwellers don't have access to these media due to lack of basic facilities like electricity. Meanwhile indiscriminate sexual intercourse is common among both youth and old ones. Even little ones that know about infection can not differentiate between Hiv and Aids, they believe once you are infected with Hiv, you have already been infected with Aids. Simply there should be more Awareness on the disease in the rural Areas.

## **AN INNOVATIVE LEARNING OPPORTUNITY**

Karen Clinker, Pat Piaskowski, Lorinda Christie-Jacobson; *Northwestern Ontario Infection Control Network (NWOICN)*, *Sioux Lookout First Nations Health Authority (SLFNHA)*, *First Nations and Inuit Health (FNIH)*,

Issue: In 2006, SLFNHA was contracted by the NWOICN to complete an environment scan which identified an immediate need for education on reprocessing (cleaning, disinfection and sterilization) in

Nursing Stations in isolated First Nations communities. After exploring a number of delivery options, a unique face-to-face conference was designed.

Project: The objectives for this reprocessing conference included

1. Address identified knowledge gaps related to reprocessing
2. Work collaboratively with participants to meet current best practices in Ontario
3. Provide information in a manner that considered the unique learning needs of a specific target audience
4. Provide learning activities in an atmosphere conducive to learning as well as in a culturally sensitive manner
5. Provide an opportunity to evaluate newly developed reprocessing procedures with the key participants who would be using these procedures

Results: A face-to-face, hands-on conference was held on October 8 and 9, 2008 in Thunder Bay. Participants were able to return to their communities with newly gained knowledge and practice skills and to immediately apply this new knowledge and practical skills in their day-to-day activities.

Lessons Learned: Very specific learning needs and educational challenges were addressed through innovative thinking and team effort. The development of a reprocessing manual and videotaped procedures will help to ensure ongoing quality assurance and education.

## **NOSOCOMIAL TRANSMISSION OF EXTENDED SPECTRUM $\beta$ -LACTAMASE (ESBL)-PRODUCING KLEBSIELLA PNEUMONIAE**

Sam MacFarlane, Natalie Bruce, Virginia Roth, Kathryn Suh, Baldwin Toye, Karam Ramotar  
*The Ottawa Hospital, Ottawa, Ontario, Canada*

Issue: Transmission of ESBL-producing *Klebsiella pneumoniae* was identified in 2 patients who successively occupied the same private room in an acute-care facility. Project: To investigate and describe the nosocomial transmission of this ESBL-producing *K. pneumoniae*. Results: On June 13 2008, Patient 1 (Mr. L) was admitted with a diagnosis of venous ulcers. Admission screening identified that he was MRSA colonized. He was placed in a private room, and contact precautions were initiated. On July 25<sup>th</sup> he was transferred to a private room (room 546) on the vascular surgery unit, with contact precautions maintained, where he remained until his discharge on September 25. On September 13, ESBL-producing *K. pneumoniae* was isolated from a clinical specimen; he was felt to be colonized and treatment was not given. Housekeeping performed a disinfection immediately after his discharge. Patient 2 (Mrs. H) was admitted to room 546 immediately after the room had been cleaned. On Mrs. H's 25<sup>th</sup> day in this room, an ESBL-producing *K. pneumoniae* was isolated from her percutaneous endoscopic gastrostomy site. The two isolates were identical by pulsed-field gel electrophoresis. Environmental specimens were not obtained for culture. Lessons Learned: Despite documented environmental cleaning between occupancy of rooms, transmission of an ESBL-producing organism between patients still occurred. Transmission may have resulted from persistence of the organism in the patient environment, inadequate cleaning and disinfection of shared medical equipment, or possibly by the hands of healthcare workers. Additional focus is needed on preventing the transmission of ESBL-producing organisms in the healthcare setting.

## **INFANT BOTULISM- FIRST CASE CONFIRMED IN NEWFOUNDLAND AND LABRADOR**

Merlee Steele-Rodway, Caroline Zuijdwijk, Melissa Langevin; *Janeway Child Health Centre, St. John's/NL, Canada*

**Background-** Botulism is a severe neuroparalytic disorder caused by toxins A through F produced by *Clostridium botulinum*. Ingestion of honey is a known risk factor for infant botulism as well as ingestion of contaminated soil in an environment where soil has been disturbed. Infant Botulism can cause significant pediatric morbidity. Early recognition and supportive care can greatly improve clinical outcomes. The importance of prompt initiation of therapy has been emphasized with clinical suspicion being the basis for diagnosis. The diagnosis can be made on clinical grounds and confirmed by detection of the toxin in the stool. Management includes meticulous supportive care. The United States Food and Drug Administration (FDA) approved the human botulism immune globulin (BabyBIG) for the treatment of infant botulism in 2003. In this presentation, the first case of Infant Botulism in Newfoundland and Labrador is described as well as the many steps in obtaining Baby BIG.

**Issues identified-** Baby BIG is not available in Canada and is only distributed by the Department of Public Health in the State of California, thus causing potential delays in the coordination of the shipment and receiving the product. Cross border issues as well as transportation delivery across a continent must be acted upon in an efficient manner. The investigation as to how this is contracted may not be readily found.

### **COME AND TAKE A WALK WITH ME!!!!**

Teri Murduff<sup>1</sup>, Joanne Habib<sup>1</sup>, Debbie Rivett<sup>2</sup>

<sup>1</sup>*Central East Infection Control Network, Whitby, Ontario, Canada,* <sup>2</sup>*Leisureworld Caregiving Centre, Scarborough, Ontario, Canada*

**Issue:** Infection Prevention and Control Professionals (ICPs) in Long Term Care (LTC) wear many hats and have competing professional responsibilities. Due to time constraints, regular Infection Prevention and Control (IPAC) unit rounds are often looked upon as more of a social activity and are thus rarely performed.

**Project:** Using adult learning principles a PowerPoint presentation was created to address common infection control risks that could go unnoticed or may be considered unimportant. The presentation serves two purposes:

1. facilitates reaching a larger audience of ICPs
2. provides the LTC ICP a tool to engage other Healthcare Workers in IPAC risk identification in their homes.

The presentation was piloted to a large forum of LTC ICPs as well as a smaller audience of Nursing Home Directors of Care in Ontario.

**Results:** LTC ICPs reported:

- increased awareness of IPAC risk
- increased understanding of their IC role
- excellent opportunities to foster positive relationships with staff
- increased engagement of healthcare staff in IPAC risk identification and prevention
- raised profile for resident and healthcare worker safety
- increased opportunity to engage staff, residents and visitors in informal and formal education

**Lessons Learned:** Providing the content along with the tool:

- facilitates implementation and engagement of an IPAC risk identification program for staff
- increases the opportunity for consistent messaging and knowledge transfer of IPAC best practice
- reinforces that regular IPAC unit rounds are an integral part of an effective and efficient IPAC program in LTC

## **Proof on a plate: A novel approach to Hand Hygiene education**

Cindy Plante-Jenkins, Florentina Belu, *Trillium Health Centre, Mississauga, Ontario, Canada*

Hand hygiene is one of the most important measures to prevent the transmission of infections. The infection prevention and control (IPAC) team at Trillium Health Centre has developed an interactive visual portrayal of alcohol-based hand rub (ABHR) efficacy. Staff participate by having fingertip bacteria colony counts determined prior to, and after, hand sanitizing. During the process, the infection control practitioner (ICP) is able to provide one-on-one coaching on proper hand sanitizing. Decreases in the fingertip bacterial colony counts after using ABHR help convey effectiveness. The proof is on the plate. Staff find this cost-effective educational exercise fun, engaging, and convincing

## **Alcohol-Based Hand Sanitizers in Schools - Hello, Is Anybody Listening?**

Mary Lu Sample<sup>1</sup>, Colette Ouellet<sup>2</sup>

<sup>1</sup>*Perth & Smiths Falls District Hospital, Smiths Falls Ontario, Canada,* <sup>2</sup>*Champlain Infection Control Network, Ottawa Ontario, Canada*

**Issue:** Alcohol-based hand sanitizers (ABHS) are recommended for hand hygiene in healthcare settings but they have not had a major role in other settings. Roadblocks to use of alcohol-based hand hygiene products in schools have been encountered in many systems.

**Project:** During the 2003-04 school year, ABHS was provided in every classroom at a small, over-crowded Kindergarten to Grade 5 rural school where no sinks were available outside the washrooms. Dispensers of ABHS were placed at the entrance to the classroom and students were required to use gel on the way in to and out of the classroom. Promotional material and education was provided to every classroom. ABHS was NOT a replacement for appropriate hand washing. Kindergarten students were supervised.

**Results:** Absenteeism rates in 2001/02 and 2002/03 were 8.7 days/pupil and 8.9 days/pupil respectively. In 2003/04, the year of the trial of ABHS, the absenteeism rate was 6.7 days/pupil. Throughout this period the number of respiratory and enteric outbreaks identified by the local Public Health Unit did not decrease (27, 15 and 34 outbreaks respectively).

**Lessons Learned:** Childhood illness and absenteeism contributes to loss of funding, increased administrative costs and parental lost time at work as well as disrupting learning. Hospitals have demonstrated success in hand hygiene campaigns when ABHS is provided at the point-of-care. Public Health and School Board support for usage of ABHS will promote healthier environments for both students and teachers may impact absenteeism. Further study is needed to support this interesting experiment.

## **"Bug Corner" - A Fun And Innovative Education Tool**

Susan Gilbride<sup>1</sup>, Joan Durand<sup>1</sup>, Sarah Forgie<sup>2</sup>

<sup>1</sup>*University of Alberta Hospital/Stollery Children's Hospital, Edmonton, Alberta, Canada,* <sup>2</sup>*Department of Pediatrics, University of Alberta, Edmonton, Alberta, Canada*

**Issue:** Today's healthcare workers (HCW) are constantly busy, and trying to attend inservices and other educational sessions is often difficult, if not impossible. The challenge to Infection Control Practitioners was to come up with an innovative educational project that could be delivered in an informal, time sensitive manner to HCW in a tertiary children's hospital in Edmonton, Alberta.

**Project:** A monthly one page newsletter named "Bug Corner" was designed by Infection Control and then posted prominently in areas frequented by HCW. The aim of the newsletter was to provide frequent, relevant infection control information in a fun and colourful manner at minimum cost. To ensure it met the needs of the paediatric staff a one page survey was sent out 21 months after the initial newsletter was published.

**Results:** A total of 96 people responded to the survey. Sixty nine percent of the respondents had read the newsletter and of those 65% read it monthly. Ninety five percent of the HCW who read Bug Corner stated they found it informative.

**Lessons learned:** The survey provided infection control with an overall view of HCW opinion of "Bug Corner". From the responses HCW generally found Bug Corner colourful and informative. The majority of the topics covered do not 'age' and to encourage distribution we then went on to provide a folder for each unit with all of the publications so that HCW can browse through it when time permits.

### **A Hairy Tale: Pre-Hospital Practices of Patients with Planned Caesarean Sections**

Wil Ng, Doreen Alexander, Andrea Currie, Bonnie Kerr, Man Fan Ho, Michelle Kuda, Kevin Carl Katz  
*North York General Hospital, Toronto, ON, Canada*

**Background:** NYGH is a large community hospital undertaking approximately 6,000 deliveries annually (approx 30% by c-section). Post c-section (C/S) surgical site infections can be associated with substantial morbidity, increased costs, and extended length of stay. One important aspect of preventing SSIs is appropriate hair removal before surgery (i.e. clipping, depilatory agents or ideally no hair removal). Since 2007, all razors were removed from our Labour and Delivery unit and all OR areas. Despite these in-house measures, the extent of inappropriate hair removal prior to hospital presentation was not known.

**Methods:** An audit was conducted to determine the proportion of patients who self-removed hair, methods used, and timing prior to C/S delivery. Nursing staff in the Birthing Centre attempted to interview all patients with elective C/S who delivered in May 2008 using a standardized questionnaire.

**Results:** 33% (159/489) of all deliveries were by C/S. 47% (74/159) of the C/S deliveries were electives. Seventy-three patients were interviewed, resulting in a 99% participation rate. Thirty (41%) of the 73 patients self-removed hair prior to arrival at NYGH. Of these 30 patients, the majority (26, 87%) self-removed hair within a week of their delivery (5 on same day, 10 on 1 day prior, 3 on 2 days prior, 8 on 3-7 days prior) and 83% removed hair by shaving.

**Conclusion:** There is a high prevalence of patients who inappropriately self-remove hair prior to their C/S, indicating a need for enhanced patient education. Prevention strategies focusing on prenatal educational materials and obstetrician awareness are required.

## **Twenty-seven Minute Initial Outbreak Management Process**

Aurora Wilson, Bonnie-Jean Wilson, Sheril Green; *Providence Healthcare, Toronto, Canada*

Providence Healthcare is a non-acute health care facility in Toronto that provides rehabilitation/complex continuing care (Providence Hospital), long-term care (Cardinal Ambrozic Houses of Providence), and community outreach (Providence Community Centre), with a total of 635 beds for patients and residents.

**Issue:** Managing outbreaks (respiratory and/or enteric) without a systematic management process leads to high stress, role confusion, poor communication and safety risks. Providence conducted an analysis of its process then developed a quality improvement initiative on outbreak management process that is organized, systematic, timely and provides a high level of safety for all.

A perception survey demonstrated the perceived comparison between the management of previous and current outbreaks. There were 19 participants from the hospital and long-term care home.

**Results:** There results were reported by the participants on the **new process**:

- Initial outbreak management meeting improved from > 2 hours to 27 minutes!
- 63% reported significant decreases in stress level
- 53% reported improvement of patient and staff safety
- 42% reported improvement in awareness of staff and volunteers' roles and responsibilities
- 42% reported that resources and supplies were delivered to affected units in a more organized and timely manner
- 37% reported improvement in awareness of the outbreak management team members' roles and responsibilities
- 26.3% reported that visitors/families were notified of the outbreak in a more timely manner

**Lesson Learned:** Efficient, timely and organized outbreak management provides improved quality of care and a safe environment for staff and patients/residents.

## **Vancomycin-Resistant Enterococcus (VRE) in Canada: Results from the Canadian Nosocomial Infection Surveillance Program (CNISP), 1999-2007**

John Embil<sup>2</sup>, Stephanie Leduc<sup>1</sup>, Denise Gravel<sup>1</sup>, Lynn Johnston<sup>3</sup>, Andrew Simor<sup>4</sup>, Anne Matlow<sup>5</sup>, Michael Mulvey<sup>6</sup>, Debbie Ormiston<sup>2</sup>, Geoffrey Taylor<sup>7</sup>  
<sup>1</sup>*Public Health Agency of Canada, Ottawa, ON, Canada*, <sup>2</sup>*Health Sciences Centre, Winnipeg, MB, Canada*, <sup>3</sup>*Queen Elizabeth II Health Sciences Centre, Halifax, NS, Canada*, <sup>4</sup>*Sunnybrook Health Sciences Centre, Toronto, ON, Canada*, <sup>5</sup>*Hospital for Sick Children, Toronto, ON, Canada*, <sup>6</sup>*Public Health Agency of Canada, Winnipeg, MB, Canada*, <sup>7</sup>*University of Alberta Hospital, Edmonton, AB, Canada*

**Objective:** Surveillance for VRE is one component of a strategy to identify and limit its spread in hospitals. The objective of our surveillance is to provide national benchmark rates for VRE.

**Methods:** CNISP has been conducting ongoing VRE surveillance since 1999. The detailed methodology for this project has been previously described. To be defined as health-care associated, there had to be no evidence that the organism was likely present at the time of admission, or up to 48 hrs after admission.

Results: From 1999 to 2007, the rate of VRE increased from 0.37 to 2.48 cases per 1,000 patients admitted. The increase was largely the result of an increase in VRE colonization, from 0.34 to 2.40 cases per 1,000 patients admitted ( $p < 0.0001$ ). The rate of VRE infection increased from 0.02 to 0.08 cases per 1,000 patients admitted. The overall incidence of VRE rose from 1.20 per 1,000 patients admitted in 2006 to 2.48 per 1000 patients admitted in 2007 ( $p < 0.0001$ ), with increases seen in all regions of Canada.

Most cases (82%) were health care-associated and were acquired in the reporting CNISP hospital. Overall, only 2% were community-acquired.

Conclusions: Although the incidence rate of VRE carriage in Canada is increasing, it remains low. The number of VRE cases reported to CNISP more than doubled in 2007. The number of cases of VRE acquired in the reporting CNISP hospitals increased in 2007 by 6%; whereas there was a decrease in the number of community-associated VRE of 2%.

## **OUTBREAK OF GASTROENTERITIS: WHAT DID WE LEARN?**

Chantal Perpête<sup>1</sup>, Denise LeBlanc<sup>1</sup>, Shirley Tremblay<sup>1</sup>, Céline Crowe<sup>1,2</sup>

<sup>1</sup>*Institut Universitaire de Gériatrie de Montréal, Montréal, Québec, Canada,* <sup>2</sup>*Université de Montréal, Montréal, Québec, Canada*

Issue: The management of an outbreak of viral gastroenteritis in a Geriatric Institute facility is a challenge. In November 2008, outbreaks of Norwalk virus were identified in the community of greater Montreal. Our facility, which has 2 buildings (A and B), had to face 2 episodes over an 8 week period.

Project: To describe the outbreak and present the intervention plan.

Results: During the first episode, 43 out of 306 patients (14%) and 8 out of 125 patients (6%) in building A and B respectively, were affected. Among staff members, the rate of illness was 6% in building A and 1.8% in building B. During the second episode, only building B was affected. Forty-one (41) out of 91 patients (45%) were affected. In this case, the rate of illness among staff members was 33%. During the management of the outbreaks, several problems were identified: wandering patients, accessibility of isolation equipment, cohorting of staff members (healthcare workers and environmental services), adjusting for the needs of disinfection and cleaning and communicating with staff, family and visitors.

Lessons learned: All problematic issues identified during the outbreaks were addressed during a postmortem analysis. Results translated into the formulation of new communication policies with the staff, families and visitors. Ordering and resupplying of equipment, management of staff, adjustment for disinfection and cleaning all were implemented into our plan of action.

## **Get the Shot, not the Flu: The Experiences of Restructuring an Influenza Vaccination Program**

Krista Maxwell; *Seven Oaks General Hospital, Winnipeg, Manitoba, Canada*

Issue: As a new ICP with recent experience as a front line nurse, it was recognized that the existing influenza vaccination program at SOGH had many limitations. These limitations, which included an unequal division of labor, duplication of documentation, a minimal tracking ability and an overall lack of leadership, had resulted in a much lower number of vaccinations than would be expected for a 280 bed facility.

Project: In an effort to improve the number of patients receiving the influenza vaccination, a new program was developed and presented to key stakeholders for approval. Upon endorsement, the program was introduced for the 2007 influenza season. This encompassed the implementation of new systems including the development of a patient vaccination information form, the introduction of standing orders and designated vaccination nurses, as well as the creation of a tracking system, all of which required education for staff and patients.

Results: SOGH has seen an increase in the number of patients receiving vaccination information. Additionally, SOGH has seen a 15 % increase in the patient vaccination rate since the introduction of the program. Finally, SOGH has not had an outbreak of influenza in its facility since the new program has been introduced.

Lessons Learned:

- Ongoing stakeholder involvement is significant
- Annual staff education is required but is time-consuming
- A comprehensive tracking system is mandatory
- Staffs' personal beliefs regarding vaccinations is to be considered
- Staffing complements and union contracts must be addressed with respect to hiring vaccination nurses

## **THE DEVELOPMENT OF A KIT FOR THE RETURN OF PROBLEM SAFETY SYRINGES**

Jo-Anne Burt, Linda Fletcher; *Whitby Mental Health Centre, Whitby, Ont, Canada*

Safety syringes were introduced at Whitby Mental Health Centre in March 2007. November 2, 2007 staff first raised concern of ongoing problems with the syringes. Because there had been no safe way to transport, busy staff tossed problem syringes in the sharps container, leading to the under reporting of defective syringes. Safety syringes are a more complex design with moving parts inside the syringe so documentation of any problem is needed with the item returned to the manufacturer to improve design making their product safer.

As there were no commercial prepackaged kits available, we needed to develop a kit that would allow staff to safely transport suspect syringes for investigation of the failure causation. With basic safety testing, IPAC staff put together a kit, using a clear VHS tape container that allowed for safer transportation of used syringes.

The kits were handed out to users January 18, 2008 with a short education session. A PowerPoint presentation on use of the kit was available on the intranet for all staff.

Prior to the Problem Syringe Safety Kit only 1 problem syringe had been returned to management. Within 6 months of introduction we had 15 problem syringes returned in the kits.

It is hoped that this presentation may stimulate commercial vendors to produce a safe tested product for the transportation of problem syringes.

## **GREET, TREAT & MEET - AN ALTERNATIVE APPROACH TO INCREASE MENTAL HEALTH PATIENT PARTICIPATION IN INFECTION CONTROL/SAFETY EDUCATION**

Jo-Anne Burt, Rebecca Yu, Linda Fletcher; *Whitby Mental Health Centre, Whitby, Ontario, Canada*

Whitby Mental Health Centre (Centre) Infection Prevention and Control Practitioners (IPC's) have been including patients as well as health care workers in Infection Prevention and Control education programs like hand hygiene. As our inpatients improve, they are given privileges to attend activities throughout the Centre. With this increased movement it was recognized that patients need to be more active participants in infection control education to minimize transmission of organisms. The challenge was having patients attend and participate in Infection Control Education. To engage and maintain patient participation the 'greet, treat & meet' approach was taken. During Infection Control Week, the fall Influenza campaign and the spring West Nile Virus campaign, the ICP arranged to attend patient care unit community meetings. The ICP greeted all the patients and provided each with a small treat. When all patients were greeted and treated, the meeting (education) began promising that all who remained would be eligible for a prize. There was more active participation when a treat was given and with the potential of a prize at the end. During Infection Control Week, 147 of the 315 in-patients participated in patient education. In the weeks post education, many smiling patients greeted ICP's waving their hands say "I washed my hands." Following the 'greet, treat & meet' session the 2007-08 influenza vaccine rates for hospital inpatients were 51% with high risk areas reaching 81.3%. With the success of 'greet, treat & meet' educational approach, it was decided to continue with this approach.

## **Exploring the key challenges in Hand Hygiene in an Ambulatory Care Operating Room Setting - Does staged education improve compliance.**

Sonja Cobham, Sonia Pagura, Jackie Schleifer-Taylor; *Women's College Hospital, Toronto, Ontario, Canada*

Ambulatory Care is an emergent area of focus in infection control. Hand Hygiene (HH) is a well established principle in the reduction of infection rates within healthcare settings. There has been a strong push from key external stakeholders such as the Ministry of Health (MOH) and public health groups (including practitioners) to tackle this pervasive issue as it has significant financial and societal repercussions. In 2007, the Ministry conducted a review in hospital settings, excluding operating room environments, to establish HH rates amongst care-providers. The results led to the MOH mandating public hospital reporting of HH compliance to inform the public, and LHINs of indicators that could reduce transmission rates in healthcare. Every hospital-based institution is committed to capturing compliance baseline rates as the platform for developing infection control strategies. Yet, one cannot apply infection standards in a generalized fashion across programs within hospital settings as the environment, interaction and level of sterility are quite different. An additional layer of complexity is the framework which Ambulatory Care Settings operate; physicians operating in Ambulatory Care Setting come from multiple sites and may have vastly different practices within each organization. The goal of the HH initiative at Women's College Hospital (WCH) was to implement a staged education model across disciplines to increase awareness and change practice. This multi-pronged approach includes several staged audits to evaluate which education strategy resulted in the greatest increase in compliance, as well as sustainability of HH levels. The modular approach included web-based learning, didactic education sessions, self-learning and visual education prompts. Pre-liminary results have demonstrated a 40% increase in overall HH compliance within the operating room at WCH

## **ZAP VAP:PREVENTION OF ADULT VENTILATOR-ASSOCIATED PNEUMONIA IN A 12 BED ICU COMMUNITY HOSPITAL**

Kristine Desjardine, Denis Binette; *Queensway Carleton Hospital, OTTAWA, ON, Canada*

Poster Abstract:

The abstract will focus on the successful launch and implementation of the Safer Healthcare Now VAP Bundle initiatives.

**Background:**We have a 12 bed closed ICU with six Intensivists who rotate and cover the ICU on a weekly basis.We operate 8 PB 840 Mechanical Ventilators, with 24 hour Respiratory Therapist coverage. Infection Control has tracked VAP rates since 2005 and data showed through benchmarking our VAP rate was above the 90th percentile.

**Methods:**We started in March 2008 with gathering baseline data on 15 patients,after which we fully implemented the 4 components of the VAP Bundle including the use of the EVAC endotracheal tube. This was done as part of an educational review and focus which included challenges and changes in practice. During the initial launch of the Bundle,the EVAC tube was trialled and evaluated in the ICU. A VAP Bundle checklist was created and put into daily use by the RT's and RN's.These stats were compiled and scored on a monthly basis by Infection Control in collaboration with Decision Support.The results of which were then reported to SHN.

**Results:**Surveillance showed that we were VAP free for 6 months from March 2008-August 2008. We continue to provide support, communication, education and feedback to the ICU team. In addition the trial of the EVAC tube resulted in hospital wide implementation (except for the OR).

**Conclusion:**We have successfully demonstrated that implementation of the VAP Bundle can result in an overall decrease in VAP Infection Rates.

## **Development of a RICN Non-acute Care Infection Control Professional (ICP) training program (NACICP) in Ontario**

Pat Piaskowski, Janet Allen, Anne Bialachowski, Nora Boyd, Karen Clinker, Colette Ouellet, Ponka Brandy, Volkening Grace, Walker Marianne  
*Regional Infection Control Networks, Ontario, Canada*

Background: RICNs identified a need for a training program for ICPs in non acute care settings through a needs assessment.

A working group was established in 2006 to review the needs assessment data and explore the feasibility of a NACICP training program. After exploring several options, the group designed a unique course offering specifically for ICPs in non-acute care settings.

Administrative processes for the program were established with one network leading the program, one providing administrative support for the technological advancement of the program and one network guiding the associated mentorship program.

The project: The program consists of 11 modules covering all aspects of IPAC practice in non-acute care settings. For each module content experts prepare a DVD of their presentation, compose pre and post test questions and develop two case studies. Each of the 14 RICNs enrolls up to 2 students, provides direct mentorship and access to resource materials for the students. All course materials and supporting documentation are mailed to the participants monthly. There is a monthly teleconference to discuss the module assignments and respond to student queries. The marks from the case studies, mid term and final exam comprise the students' marks. A passing grade of 60% is needed to successfully complete the program. CHICA endorsement is currently being considered.

## **Antimicrobial Resistance Among Nosocomial Isolates in a Public Hospital in Peru**

Yuri Garcia-Cortez<sup>1,2</sup>, Jaime Alvarezcano Berroa<sup>1,2</sup>, Raul Montalvo Otivo<sup>1,2</sup>, Ruben Dario Vasquez Becerra<sup>1</sup>

<sup>1</sup>San Marcos University, Lima, Peru, <sup>2</sup>Dos de Mayo Hospital, Lima, Peru, <sup>3</sup>Care Center "Raul Patrucco Puig", Lima, Peru

Issue: Emergence of multiresistant strains of hospital pathogens has presented a challenge. Bacteriological surveillance of the cases of nosocomial infections is crucial for developing antibiotic stewardship programs.

Methods: A prospective study was undertaken during January through December 2007 among 802 patients from medicine, surgery, pediatric and gynecology-obstetric wards at Dos de Mayo Hospital in Lima, Peru. Patients were tracked for the occurrence of nosocomial infections (NI) through clinical-bacteriologically. Antibiotic susceptibility testing was undertaken using Kirby-Bauer disc diffusion method. Results: The overall infection rate was 26.18 per 100 patients. Nosocomial pneumonia was the most common NI (23.47%), followed by intravascular catheter-related infections (22.8%), wound infection (19.8%) and urinary tract infection (18.15%). Ninety nine percent of the isolates were bacterial. More than 70% of the NIs were caused by Gram-negative bacteria predominantly *Pseudomonas aeruginosa* and *Escherichia coli*.

Almost 5% of the isolates were resistant to all the antibiotics for which susceptibility was tested, the rest were sensitive to amikacin, cefoperazone-sulbactam, cotrimoxazole, methicillin, teicoplanin, vancomycin, rifampicin, imipenem, aztreonam and linezolid, either independently or in combination. The proportion of MRSA was 43%. Resistance to a particular antibiotic was found to be directly proportional to the antibiotic usage in the study setting.

Conclusion: Surveillance of nosocomial infections by using microbiologic surveillance and reinforcement of hand washing are critical to avoid polyantimicrobial resistant nosocomial infections in a hospital.

## **Community Health Centre: Infection Control Partnership**

Rebecca Hamlin, Lori Jessome-Croteau; *Capital District Health Authority, Nova Scotia, Canada*

**Issue:** The community health center (CHC) setting provides ample opportunity for the transmission of microorganisms from person-to-person and through contaminated fomites, environmental surfaces, and reusable medical equipment. Many independent CHCs do not have dedicated infection control resources or easy access to infection prevention and control expertise.

**Project:** At the request of the CHC's management, an infection control audit was undertaken and several key recommendations made. An ongoing action plan was developed by the CHC based on these recommendations. Continued support was provided by the infection control practitioners and key contacts within the health district were identified. A follow up interview was completed ten months after the initial review.

**Results:** Key areas for improvements were prioritized based on patient safety and available resources. Some of the improvements undertaken included: initiation of a respiratory hygiene program in the reception area; moving all sterilization to the local hospital; cleaning and disinfection of non-critical medical devices between patient visits; initiation of an infection control policy binder; and improvements in the handling and storage of sterile supplies.

**Lessons Learned:** Infection control professionals can provide a valuable service to their community through outreach consultation and collaborative efforts. In future, the development of a standardized audit tool and report template would facilitate the process.

## **Additional Precautions Pocket Cards - Development Of A New Resource For Acute And Long Term Care**

Tim Cronsberry, Christine Moussa; *South Western Ontario Infection Control Network, St. Marys, Ontario, Canada*

**Issue:** In many acute care and long-term care organizations there can be infrequent indications for the use of Droplet, Contact, and Airborne precautions. In such lower-incidence settings, health care workers may benefit from reminders. The use of precaution signs and pocket cards are examples of such reminders.

Pocket cards have been used for other care issues such as CPR steps and acute care "codes", yet evaluations of the effectiveness of this tool in the practice area of infection prevention and control are not apparent.

**Project:** The South Western Ontario Infection Control Network created pocket cards addressing proper Personal Protective Equipment (PPE) use for Additional Precautions. Both Acute Care and Long Term Care versions were created based on the Provincial Infectious Diseases Advisory Committee's (PIDAC) Best Practice Guidelines in Ontario.

The cards were distributed to 923 staff in Long Term Care, and 1096 staff in Acute Care in December 2008. The pilot concluded in February 2009.

Results: Anecdotal results prior to the extensive survey of participants showed an enthusiastic response and observed use of the resource. Feedback received from the pilot will be applied to the final version of the resource.

Lessons Learned: The pocket-card format used in this project offers healthcare workers a convenient resource that will assist them in protecting themselves and others through the effective use of PPE. An implementation barrier to the use of the cards is the adoption of a standardized colour scheme for Additional Precautions across participating organizations.

### **Respiratory Algorithms: Breathing Easier about Patient Management**

Gail Busto, Sydney Scharf, Elizabeth Bryce, Serena Siow  
*Vancouver Coastal Health, Vancouver, British Columbia, Canada*

**Issue:** Vancouver Coastal Health region sees 308,000 Emergency Department (ED) patients annually; approximately 125 new cases of tuberculosis are diagnosed. Many ED patients have an undiagnosed respiratory illness and could pose an infectious risk to staff and other patients. A standard approach to patient management to reduce the risk of secondary exposures to potentially communicable respiratory infections was devised and evaluated.

**Project:** The algorithm was introduced in 2003 at Vancouver General Hospital (VGH), and refined during introduction at Lions Gate (2006) and Richmond General Hospitals (2008). Directions for triage, isolation, barrier precautions, housekeeping and patient designation when admitted are outlined. An electronic flag identifies the patient as they progress through the hospital; an automated electronic census identifies flagged cases daily to the ICP.

**Results:** During the past four years, 1719 patients have been flagged at VGH with an average of 3.4 days isolation for non-TB patients and 10.2 days for TB cases (n=111). The number of post-exposure TB follow-ups declined from up to 10/year pre algorithm to zero. Staff scored the algorithm as 4.6/5 for ability to protect with slightly lower scores for accessibility to isolation rooms, flagging instructions, and use of protective eyewear.

**Lessons learned:** Implementation highlighted the need to a) include all stakeholders, b) provide adequate resources (barriers, isolation rooms, adequate ICP staffing for follow-up), c) clearly delineate roles and responsibilities, d) ensure consistent use by all professions, and e) embed in practice to ensure sustainability.

### **BAD BUG IN BPTU (BURNS PLASTICS AND TRAUMA): LESSONS LEARNED FROM AN ACINETOBACTER BAUMANNII OUTBREAK**

Mary Cameron-Lane, Gail Busto, Elizabeth Bryce, Sydney Scharf; *Vancouver General Hospital, Vancouver, British Columbia, Canada*

**Issue:** Multidrug Resistant *Acinetobacter baumannii* (MDR ACBA) is recognized worldwide as a nosocomial pathogen. The index case in an outbreak of MDR ACBA on a 24-bed Burns, Plastics and Trauma unit (BPTU) was an internationally transferred patient.

**Background:** The outbreak involved a total of eight patients, the index case, five BPTU patients and two ICU patients. Six patients developed infections (bone, sputum, blood, wounds, urine) with some requiring colistin therapy.

**Investigation:** One of eighteen environmental cultures was found to be positive for the same biotype of MDR ACBA. This culture was taken from a drain grate structure in a common burn shower room that, when dismantled, was found to contain pieces of debrided skin, confirmed to have the MDR ACBA. The proper cleaning of this drain was overlooked prior to our investigation.

The epidemiology link of the first identified patient in the ICU strongly suggested hands (health care workers) as the means of transmission. Environmental contamination was not found in the ICU.

**Lessons Learned:**

1. Initially our guidelines focused on those patients arriving from the Middle East. Our experience however, has demonstrated the need to broaden our screening protocol to include all international transfers. To date, we have identified MDR ACBA in patients from the following countries; Afghanistan, USA (Las Vegas), Egypt, Hong Kong and Vietnam.
2. This outbreak underlines the importance of examining the environment as well as focusing on contaminated hands as sources of transmission

**Quality Control for Chemical Dilution Systems used in Healthcare is Indispensable**

Cindy O'Neill, Lee Ramage, Loretta Wyatt, Lisa Ballantyne; *Hamilton Health Sciences, Hamilton, Ontario, Canada*

**Background:** Chemical dilution control systems are used in healthcare to dilute concentrated disinfectants to an ideal strength for effective environmental decontamination. These systems, compared to manual dilution methods, are economical, efficient and promote a safer workplace. However, quality control (QC) and preventative maintenance standards to assure performance are lacking in the cleaning and healthcare industry. The automated systems used to dilute concentrated accelerated hydrogen peroxide (AHP) products for disinfection cleaning were assessed for reliability at Hamilton Health Sciences-Henderson Hospital site.

**Method:** Three control systems used to dilute AHP concentrates: 7% (Percept™) at 1:16 dilution (0.5%) and 3% (PerDiem™) at 1:256 dilution (0.01%), were evaluated for reliability over 30 days. Virox AHP indicator test strips were used to check use-dilution of Percept (5000 ppm AHP) and PerDiem (100 ppm AHP). QC was repeated if the initial test was outside the acceptable range. Service was arranged when repeat QC failed. Ready to use AHP product was employed until problem resolved.

**Results:** Overall, nine QC failures were detected on all systems during the 30 day testing: five failures on one system, three on the second and one on the third. Seven failures involved Percept below (< 500 ppm) acceptable concentration and two involved PerDiem above (500 ppm) required concentration.

**Conclusion:** Disinfectants must be used in the dilution specified by the manufacturer for optimal decontamination. Although there is a benefit to using automated dilution systems in healthcare, findings show that attention must be given to quality control and preventative maintenance to assure optimum results.

## Where is Your Hospital's Pandemic Zone?

Jen Tomlinson<sup>1,2</sup>

<sup>1</sup>*Concordia Hospital, Winnipeg, MB, Canada,* <sup>2</sup>*Winnipeg Regional Health Authority, Winnipeg, MB, Canada*

**Issue:** A pandemic influenza is a global threat that is overdue for a repeat emergence. The impact of the pandemic regarding severity, age distribution and extent of spread will be unknown until the virus spreads among the human population. Hospital leaders must prepare now for pandemic influenza in order to reduce morbidity and mortality outcomes.

**Project Description:** Preliminary strategies to create a designated pandemic influenza area were developed by a community hospital pandemic planning committee using current information. A literature review was completed and an environmental scan of the hospital performed. Key areas included isolation considerations, hospital structure, supplies, executive support and potential challenges.

**Results:** Findings suggested renovation considerations may be challenging, protocols and education are required without delay, and the availability of supplies imply an ambiguous outcome. Cost implications were factored into areas of concern. Limited information from existing articles is available to create pandemic areas, although national guidelines regarding pandemic influenza management of symptomatic patients remain forthcoming. The Winnipeg region has preliminary pandemic planning recommendations for designated cohort areas and was a significant resource.

**Lessons Learned/Implications:** Pandemic planning is time consuming and requires the commitment of key stakeholders. Although the development of a pandemic area will be complex, preparedness plans will facilitate an accelerated response for hospital settings. Intensifying pandemic awareness among the leadership population and infection control professional groups is necessary as a heightened alertness may lower the clinical attack and slow pandemic development.