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Pearls of Wisdom

LEADERS' ROLE IN INFECTION PREVENTION AND CONTROL

FIGHTING THE INVISIBLE AND INVINCIBLE... IF ONLY...

INTRODUCTION

If only we could enlarge the microbes to a sharp, clearly visible image and give it character, perhaps then we could terrorize people into a new respect for infection prevention, control, and practice compliance. It would remind us there is no safe place to run and hide – they are inside you, all over you and on everything you touch! Microbes falling over each other to get to you and to everyone around you. Scary thought!

Imagine the fat, ugly pseudomonas glaring at you in defiance – from every drop of water you touch, drink or use – shouting, “Show me the way to ICU!” Methicillin-Resistant Staphylococcus Aureus (MRSA) with hands on hips and an impenetrable suit of armour, taunting you with,



Photo by Provincial Lab of SK

Influenza virus

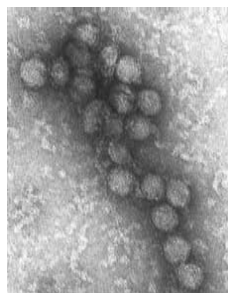


Photo by Provincial Lab of SK

West Nile Virus



Photo by L. Socha

Dr. Lawlor scrubbing his hands

“Just try me!” Or the SARS corona virus flying through the air, on vehicles of aerosols, passing through an ill-fitting mask to land in your mouth and eyes. Killer clostridium from someone’s bowel, picked up from the door handle because someone before you skipped the hand washing, is now sitting on your fingers just waiting for you to touch your lips. Old faithful, staphylococcus aureus, dancing about like a king, singing, “After hundreds of years I still rule the world of surgical wounds.” Legionella lurking in the biofilm of hot water tanks, pipelines, faucet aerators, and dead-end plumbing, crying, “Just let me out... it is time for a pneumonia attack.” A new guest at the party produces shudders of fear – everyone welcome Anthrax. West Nile arrives at the party to contaminate our blood and provide meningitis in the process. All together they shout, over and over again, “Let’s mutate! Let’s mutate!”

Trying to fight the invisible dangers of the historical, current, and emerging pathogens is not unlike fighting ghosts. Most human beings believe more in what we see than it what we cannot see... and this attitude drives our practices. Why, with all we know, do healthcare workers still have a hand-washing rate that is estimated at 40%¹ ... but may be even lower. We know that mucous membrane is a common route for microbes that can make us sick or even kill us... and yet health care providers too often defy the aseptic protocols of dress code, masks, glove usage, and even hand washing with its over 200 years of proven efficacy? Are we being independent and thinking we’re invincible? Where can we start to change this?

Continued on Page 21



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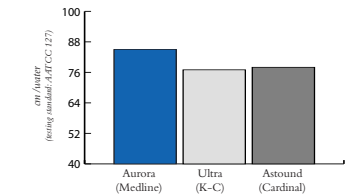
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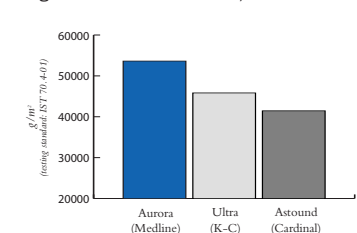
Hydrostatic Head

(A common method of testing protection. Higher numbers are better)



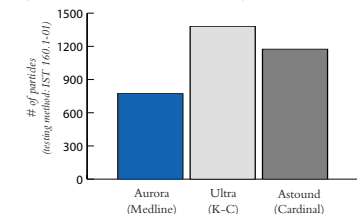
Moisture Vapor Transmission Rate

(A common method of testing breathability. Higher numbers are better)



Linting

(Lower numbers are better)



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The Isabelle Adams Award is presented to an outstanding Perioperative Nurse, who has made a significant contribution to operating room nursing in Canada. The award is presented at the biennial ORNAC national conference to an OR nurse whose professional life reflects the practices and ideals of Ms. Adams.

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CORL CORRAL (cont.)

Leadership Roles, Responsibility and Accountability

Don't let the death of a colleague be the trigger that spurs you to be an infection prevention monitor and crusader. Delegating this responsibility to others does not mean you do not have a major role and influence in this area. The sobering reality of SARS is that it offers a prelude to what lies before us. It is important to integrate yet another responsibility (infection prevention) into our often all-consuming jobs.

Be a Role model – Demonstrate consistent patterns of practice, attitudes and behavior towards infection prevention and risks in your work place, home and community. Don't underestimate your impact – you set the tone and the expectations. Never cut corners that violate principles and remember you are the nurse – one of Florence's protégés.

Obtain Knowledge – Science is ever changing. Sacred cows may have been slaughtered, only to later gallop back into favour. Overwhelming volumes are available both in print and through on-line web sites. The international community of the World Health Organization (WHO) is playing a very large role in setting standards and recommending practices. It is closely integrated with governments and other designated organizations. Your local and provincial Medical Officer's of Health (MOH) have also likely established web sites. Health Canada (HC) and the USA Centers for Disease Control (CDC) are vast resources of current information in user-friendly formats. Locate credible sources such as these, "bookmark" their web sites for ease of access on an ongoing basis, and visit them regularly. You can skim or, when time allows or need dictates, you can delve deeply into these sites to obtain extensive detail. Spend a little time each week surfing the web for new, current, information. Learn and use the "new language" of infection control – including terms such as *Respiratory Etiquette*. Share tidbits of new information with your team on an ongoing basis.

Create a Learning Environment – ensure that you establish and maintain a learning, teaching, and mentoring environment that is focused on patient and staff safety as well as risk management.

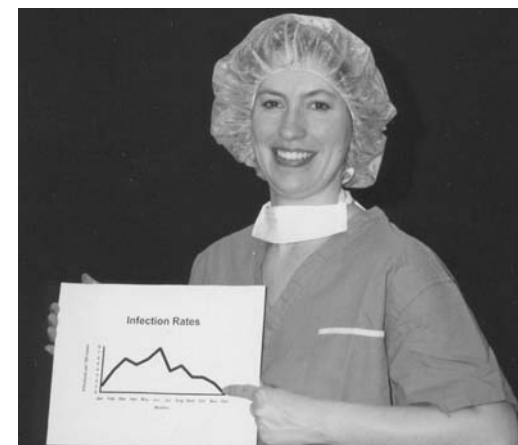


Photo by J. Porteous

*Infection rates on the decline
(held by OR Nurse Melodie Kurys)*

Teach both the reasons and the principles – people respond better to the implementation of new practices if they understand the "why". Use innovative and creative ways to share information. Too much familiarity with a topic may cause some team members to "tune out" especially when the traditional format of a one-hour long, repetitive, lecture is used. A rapid "fast food approach" providing the key facts in a brief format is most effective. Be sure to change posters and warning signs often, to continue to draw attention, and to keep them simple. Keep them brief and to the point to allow for a fast read. Integrate infection prevention into your orientation and your annual education updates. Place articles in lounges and theatres and update them frequently so others can read, and share, the information they contain.

Monitor and Supervise Practices – Tasks that are considered more important, or tasks that command immediate attention, will always threaten to take the lead role in your scheduling. As the leader you must work to keep this life and death issue at the top of the list of daily practice priorities through continuous monitoring and corrective practice. Make people accountable for the risks that their defiance or lack of awareness, brings to others.

Practices to prevent high-risk infection:

Hand Washing – the age-old problem of non-compliance, when it comes to hand washing



Photo by L. Socha

Incorrect wearing of mask

practices, still continues... and now it is combined with the misuse of gloves. It is not uncommon to observe individuals touching many objects in the room with potentially highly contaminated gloves, spreading pathogens to unsuspecting colleagues. Establish the protocols based on principles, and then enforce them. Circulators need remove the gloves, unless there is a high priority reason not to. Personnel are much more attentive to what they touch with bare hands than they are when gloved. A large number of people continue to bypass the sink after using the washrooms. As a result it is highly advisable to place the paper towel waste bin near the door, use paper towel to turn the door handle, and then dispose of the paper once the door is open. Remember, whatever is on the doorknob could soon be on your fingers... that will soon be near your face and your mouth.

Active vigorous hand washing using soap, and placing extra emphasis on the spaces between the fingers, will remove the vast majority of organisms. Keeping fingernails short and clean is essential. The wearing of artificial or gel nails must not be permitted, as they will harbour fungus that, while it may not affect staff, can be lethal for compromised patients. Many Canadian hospitals are beginning to introduce alcohol hand rubs or gels. These products have been used in Europe for over 30 years.

While they have been reported to be a good as, or perhaps better than, traditional hand washing excess use of alcohol gel may cause drying, especially if skin is subject to irritation. In addition, their use does not preclude serious soap and water washing at the beginning of each

day and whenever significant contamination may have occurred (i.e. upon removal of surgical gloves, after inadvertent handling of body fluids, and following use of the rest room).

The availability of alcohol rubs at workstations, or in staff pockets, should, however, increase the effectiveness of hand decontamination. However, while to this date there have not been any reported fires caused by the hand alcohol products concerns about the risk of fire do exist. At this time the rules of use seem to vary from one fire department to another. Leaders should ensure the Infection Control Committee approves all products and work with the designated fire marshall to determine an acceptable location for the products.

Masks – Used masks are highly contaminated by the organisms from the wearer's own mouth and noses well as the organism laden aerosols that may have landed on the outside of the mask. The results of a cough, a sneeze, or the use of aerosols (i.e. for high speed drills and irrigators) are frequently within a full three-foot radius of the source. Is your respiratory system protected? The organisms will live where they land for several days – what are you carrying around?

Handling of a used mask with bare hands, rolling it up in to a pocket for future use, hanging it around your neck, or pushing it up on to your forehead is a high risk practice that encourages the spread of organisms... not a status symbol. Masks should only be handled by the strings. Careful tying of masks at the back of the neck



Photo by L. Socha

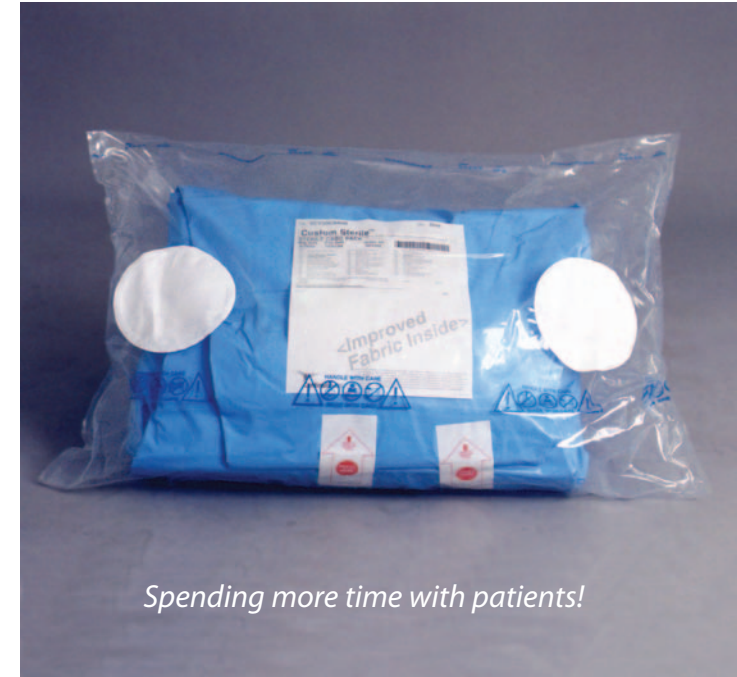
Mask being worn correctly

Continued on Page 36

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Choosing A Reprocessing Method (cont.)

manufacturer for written guidelines. Reprocessing instructions accompany all new reusable medical devices. Keep a copy on file.

BENEFITS AND LIMITATIONS

Once it has been determined that the processes being considered are both effective and safe, the in-use characteristics become relevant. Depending on the processes, there may be a wide variety of method-specific benefits or limitations to consider. The three listed in Table 3 are common to all reprocessing methods. Add any others that are relevant to your facility and to the specific methods being considered.

CONCLUSION/SUMMARY

The choice of a reprocessing method depends on many factors and there is no one perfect method that suits all situations. The needs of patients, staff and the healthcare facility, as well as the types of products available at any given time, will all influence the decision. And that decision will not be final. Products change as do

consumer needs. As a result the reprocessing decision will need to be reviewed, on a regular basis, in order to ensure that it remains current.

For further information on this topic, or if you have any questions, please contact the author at bbolding@medca.jnj.com.

References:

1. Favero, M and Bond, W. Chemical Disinfection of Medical and Surgical Materials. In Block S. ed. *Disinfection, Sterilization and Preservation*. Philadelphia: Lippincott Williams & Wilkins, 2001:895-896.
2. Canadian Standards Association. *Z 314.3-01 Effective Sterilization in Health Facilities by the Steam Process*. CSA International. Toronto: 2001. pp 18-26.
3. Society of Gastroenterology Nurses and Associates, *Guideline for the Use of High-Level Disinfectants and Sterilants for Reprocessing of Flexible Gastrointestinal Endoscopes* p. 4. From the web www.sgna.org 30 August 2003. ✱

CORL CORRAL (cont.)

and top of the head is very important to preclude any side vents. It is believed that staff members may have become infected with SARS due to improper wearing and handling of masks.

Use of the regulation N95 masks, with proper fit testing by the Occupational Health department, has become standard for SARS and related viruses. Initially it was thought that surgical masks were sufficient to protect against SARS but that theory has been disproved. Refusal to modify facial hair to accommodate the proper fit of N95 masks presents risk of inadequate protection. In addition, fit testing needs to be redone every year or two. The developments in this field and changing information are not widely understood among team members.

Conclusion

It is of grave concern, in this age of mass media and easy access to information, advanced education and scientific evidence, that a lack of

compliance to the fundamental basics of hand washing and the proper wearing of masks still pose an infection prevention risk. It is sometimes said, "The further ahead we are, the further behind we become." Key points for safe health care teams include having current knowledge, sharing the information, following protocols and ensuring your teammates comply. Be a role model for all! Our patients, friends and families may live because of two basics in health care – hand washing and the proper use of masks.

WASH YOUR HANDS!

References:

1. Source: www.handhygiene.org

Infection Prevention Source Web Sites:

www.hc-sc.gc.ca
www.health.gov.ab.ca
www.cdc.gov/ncidod/sars
www.cdc.gov/ncidod/hip.ARESIST/mrsawww.cdc.gov/flu/avian ✱

HOSING CAN BURN.

PROTECT YOUR PATIENTS - ATTACH A BLANKET.



This patient was admitted to the hospital for surgery. While in surgery, the patient had a forced-air warming hose placed between his legs for more than four hours without it being attached to an inflatable warming blanket. As a result, the patient received third degree burns that required months of medical attention and two additional surgical procedures that resulted in scarring on both legs.

Every day patients are unintentionally and unnecessarily put at risk by a practice called "hosing" – using forced-air warming systems without their inflatable blankets. Forced-air warming, a safe and proven technology, improves patient outcomes dramatically. Hosing, however, has led to numerous reports of 1st, 2nd and 3rd degree burns, and injuries requiring plastic surgery and amputation. Ironically, practitioners of hosing may think they are saving money by not using an inflatable blanket. In actuality, inflatable blankets (most costing less than \$10) are an integral part of these safe, reliable, time-tested systems.

Every instance of such hosing, regardless of the system used, invites potentially harmful consequences. For an educational packet on the prevention of hosing or a copy of an ECRI hazard report on the misuse of forced-air warming, please call 1-800-733-7775 or find materials at www.stophosing.com.

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