Cooper
University Hospital

Bridges to Excellence

A publication for nurses and healthcare professionals

It starts with the Hands

Professional Calendar

For more information on continuing education courses please contact Cooper University Hospital, Patient Care Services-Education Department at **856-342-2459**; or log onto **www.cooperhealth.org**

Table of Contents:

EXECUTIVE EDITORS

Lynn Ruoss, RN, MSN, CCRN-CSC, APN.C
Clinical Nurse Specialist, Critical Care

Stacey Staman, RN, MSN, CCRN
Clinical Educator, Trauma

Kathleen Yhlen, RN, MSN, NE-BC
Clinical Educator

CONTRIBUTING EDITORS

Dianne Charsha, RNC, MSN, APN
Associate Chief Nursing Officer

Susan Pellecchia BA, MA
Assistant Director – Clinical Information Systems

E-mail comments about Bridges to Excellence to:
yhlen-kathleen@cooperhealth.edu

To add someone to this mailing list, or to correct your address please email:
yhlen-kathleen@cooperhealth.edu

Cooper
University Hospital

World Class Care. Right Here. Right Now.

From the Chief Nursing Officer

Elizabeth Bobulski, RN, BS, MPH • Senior Vice President of Patient Care Services and Chief Nursing Officer

This edition of *Bridges to Excellence* has a variety of articles that we hope you enjoy! 2009 has been an exciting year here at Cooper with many moves to new patient care space, the implementation of an electronic health record and important work on shared governance. Of special note is the process we have employed to design our new shared governance structure. 74 Registered Nurses from across our specialty areas came together in June with the focus to employ the evidenced based literature and redesign our existing model. Despite an awesome charge, the team worked with focus and determination and created a model for our future. The evidence indicates that when nurses lead their practice and the model of care, great outcomes will follow for patients. Here at Cooper we will truly have a council structure designed and built by Cooper Nurses. What a powerful key to future success!

As always, we look forward to any comments or feedback on this edition.

Best regards,

Elizabeth Bobulski RN, MPH
Senior VP Patient Care Services, CNO

Email comments to **Bobulski-liz@cooperhealth.edu**

Post Script: As of the mailing of this edition of Bridges I have left Cooper to attend to family needs. What an honor it has been for me to serve in the Sr. VP of Patient Care Services and Chief Nursing Officer role. Cooper is blessed to have a fabulous interdisciplinary care team.

I am pleased to announce that Dianne Charsha, RNC, APN, MSN, Associate Chief Nursing Officer will be the new Sr. VP for Patient Care Services and Chief Nursing Officer. Effective November 14, 2009. Dianne is a dynamic leader with passion for patient family centered care. She exemplifies an interdisciplinary approach to care and has a rich background in all aspects of Nursing leadership. I look forward to watching the wonderful things to come at Cooper. It is truly a fabulous organization, thanks to it's excellent employees. Best wishes to all.

Evidence Based Practice in Nursing:
WHAT, WHY, HOW, WHO

Carole-Rae Reed, PhD, RN, APN BC

The latest buzz word in nursing and healthcare is Evidenced Based Practice (EBP). We all use the lingo, but how many of us actually understand the true meaning of evidence based practice? Could you give an example of evidence based practice in operation on your clinical unit? Is it having references attached to written policies? Or does it require data collection and analysis? How is it different from how we have always practiced nursing? Why should we do it and who is responsible for seeing that it gets done?

What is EBP?

The idea of evidence based practice was first introduced in the 1970's by Dr. Archie Cochrane, a British epidemiologist. Cochrane championed the need for reviews of research evidence that are prepared using a systematic, rigorous process (Polit & Beck, 2008).

Most definitions of EBP are derived from the following definition first published in an editorial in the British Medical Journal which defines evidence based medicine as, "The conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. Evidence based clinical practice requires integration of individual clinical expertise and patient preferences with the best available external clinical evidence from systematic research, and

consideration of available resources" (Sackett, et al., 1996, p. 71).

Polit & Beck (2008) broadly defined EBP in nursing as "the use of best clinical evidence in making patient care decisions" (p. 3). They state that such evidence comes from research conducted by health care professionals. Titler (2008) stated that best evidence in nursing comes from clinical trials, descriptive and qualitative research, scientific principles, and expert opinion. The American Nurses Credentialing Center (ANCC). Magnet Recognition Program application manual (2008) defines evidence based practice as "a science-to-service model of engagement of critical thinking to apply research-based evidence (scientific knowledge) and practice-based evidence (art of nursing) within the context of patient values to deliver quality, cost-sensitive care" (p. 2).

Sources of Evidence

Research in nursing and related health care is the source of evidence that most often comes to mind when thinking about EBP. But there are several other sources of reliable evidence to use in determining best practice. Some consider systematic reviews the cornerstone of EBP (Polit & Beck, 2008). A systematic review is a comprehensive review of the existing research on a specific topic that ranks the evidence to draw conclusions. Criteria regarding which studies can be included are specified. Systematic reviews most often form the basis for practice standards and clinical guidelines. The most well known database for systematic reviews is the Cochrane database which contains systematic reviews on a variety of healthcare topics. Systematic reviews rank the strength of evidence. The strongest form of evidence is considered the randomized clinical trial (RCT), although many also consider meta-analyses, and systematic reviews themselves as top level evidence (See Table 1). A meta-analysis is a technique for statistically combining and integrating findings from several studies on the same topic (Polit & Beck, 2008).

Guidelines from organizations such as the Joint Commission on Hospital Accreditation Organization safety guidelines have become an industry standard in acute care. They are based upon review of existing evidence and practice. Many nursing specialty organizations have developed standards for their areas of practice. Some have resources specifically for EBP. For example, the Oncology Nursing Society (ONS) developed Putting Evidence into Practice (PEP) resources that list treatments for common cancer related symptoms and side effects with levels of evidence for each. There is an entire section of their website devoted to Research/EBP. Assembled information such as benchmarking, cost, performance improvement, and risk management data is another source of reliable evidence. The American Nurses Association (ANA) National Database of Quality Indicators (NDNQI) is a repository for core measures of nursing sensitive quality indicators that allow nurses to evaluate nursing performance relative to patient outcomes and to determine progress in patient care improvements (ANA, n.d).

Table 1 **Levels of Evidence**

Level I	Randomized clinical trial (RCT); Systematic review; Meta-analysis; Evidence-based practice guidelines
Level II	One RCT
Level III	Well designed trials without randomization
Level IV	Case control & cohort studies
Level V	Systematic review of descriptive and qualitative studies
Level VI	One descriptive or qualitative study
Level VII	Expert opinion; Report of expert committees

Adapted from: Melnyck & Fineout-Overholt, 2005; Polit & Beck, 2008

Table 2 **PICO Model**

PICO	Stands for:
P	**Patient or Population:** Condition, characteristics, primary problem
I	**Intervention:** Procedure, diagnostic test, medication, treatment, exposure
C	**Comparison:** To determine whether one method is better than another *NOTE: COMPARISON NOT ALWAYS NEEDED*
O	**Outcome:** What you want to measure, improve, or affect

Adapted from: UMDNJ Real-Time EBM Program (n.d) & McKibbon, A, Hunt, D, & Richardson, S. (2002).

When the above sources of evidence are lacking, nurses must rely upon clinical experience and observations or expert opinions to determine best practice in a given situation. This may be done by convening a committee to evaluate existing evidence and underlying scientific theory and principles. Recognized authorities on the topic may be consulted. If time permits, research may be conducted to determine best practice. At its best, EBP integrates research findings with clinical expertise, available resources, and patient preferences and values.

How to Adopt EBP

Models of EBP commonly involve identification of a patient or population problem or a question about practice, searching the literature for evidence (usually research), weighing the evidence, and deciding if it can be applied to the specific problem, population, or setting in question. If there is clear and strong evidence, a practice change may be indicated. If the evidence is weak or unclear, or not specific to the area of concern, then nurses may consider conducting a pilot study or consulting an expert. Perhaps the most well known method for coming up with questions to research for evidence based practice is the PICO model (McKibbon, Hunt, & Richardson, 2002; UMDNJ, n.d.) (See Table 2).

Nurses have always utilized evidence to back up their practice to some extent, but in the past these efforts were hampered by lack of solid evidence and difficulty accessing it. Now there is more evidence available due to increased emphasis on EBP, and increased access through the internet and other means. EBP is going on in some way in most nursing units, although nurses may not identify it as such. Can you think of some examples of EBP on your unit and ways in which you can make it more visible? It really is not very different from what we have always done. Now it has a name, and we are obligated to make others aware of the evidence behind what we do. EBP also brings opportunities for adding to nursing knowledge through systematic reviews or conducting research.

Who should participate in EBP and why?

Evidence based practice is not a transitory fad (O'Grady & Malloch, 2008). It will not go away. The explosion of information available through electronic sources has changed the world forever. Nurses need to know about EBP and how they can participate in using and creating evidence based nursing practice. The public and third party payers are demanding EBP from providers. Nurses have an obligation to provide the most current, most effective, safest, and cost effective care while considering patient preferences and values. However, O'Grady and Malloch (2008) caution that a model that considers only rigorous research evidence may disregard other important "ways of knowing" essential to nursing practice. If one wants to know what it is like to live with a chronic disease, it is possible that a qualitative study outlining the lived experience may be a more appropriate source of information than a RCT. Nursing is a science, but it is also an art. The art of EBP is in knowing when and to whom the evidence can be applied. If a RCT indicates that an intervention is effective in one patient population, it does not necessarily follow that it will be effective in a different population. Only educated, clinically experienced nurses can determine how best to apply research findings, guidelines, or other sources of evidence to nursing care in order to provide optimum patient outcomes for individual patient and specific populations. Nurses are the best people to weigh the evidence for their practice.

Email comments to **Reed-Carole-Rae@cooperhealth.edu**

References:

American Nurses Association. (n.d.). NDNQI: Transforming data into quality care. Retrieved on 5-11-09 from http://www.nursingworld.org/MainMenuCategories/ThePracticeofProfessional-Nursing/PatientSafetyQuality/NDNQI/NDNQI_1/NDNQIBrochure.aspx

American Nurses Credentialing Center (2008). Magnet Recognition Program: Application Manual. Silver Spring, MD: Author.

McKibbon, A., Hunt, D., & Richardson, S. (2002). Finding the evidence. In: G. Guyatt and D. Rennie (Eds), Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice. Chicago: American Medical Association Press.

Melnyk, B.& Fineout-Overholt, E. (2005). Evidence-based practice in nursing & healthcare: A guide to best practice. Phila.: Lippincott Williams & Wilkins.

Oncology Nurses Society (n.d.). Research/EBP. Retrieved 7-01-09 from http://www.ons.org/research/

O'Grady, T. & Malloch, K. (2008). Beyond myth and magic: The future of evidence-based leadership. Nursing Administration Quarterly, 32(3): 176-187.

Polit, D. & Beck, C. (2008). Nursing research: Generating and assessing evidence for nursing practice (8th ed.). Phila: Lippincott Williams & Wilkins.

Sackett, D., Rosenberg, W., Gray, J., Haynes, R., & Richardson, W. (1996). Evidence based medicine: What it is and what it isn't [Editorial]. British Medical Journal, 312:71-72.

Titler, M. (2008). The evidence for evidence-based practice implementation. In M.G. Hughes (Ed), Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville, MD: Agency for Healthcare Research and Quality.

UMDNJ (n.d.). Real-Time EBM Program: PICO model. Retrieved 5-13-09 from http://www4.umdnj.edu/camlbweb/ebm/picomodel.htm

.

ELECTRONIC HEALTH RECORD:
One Patient – One Record

Emma Brandon, RNC, BSN, MHA, NE-BC
Stacey Staman, RN, MSN, CCRN

Mary Smith, a 48 year old female recently fell and was seen in the Emergency Department (ED). She was treated and released with instructions to follow up with her primary care provider (PCP). Because her PCP is part of the hospital system and has implemented an Electronic Health Record (EHR), when Mary arrives for her office visit the PCP is able to review all treatments and interventions provided in the ED. The ability of the PCP to access films through the EHR has eliminated the need for the patient to go to the hospital to pick up a CD of her films. Tetanus administered in the ED automatically updated Mary's immunization record although she did not recall if this was done. This is just one example of how electronic information can improve patient care and their experience.

What is an EHR?

Healthcare Information and Management System Society (HIMSS) defines EHR as "a longitudinal electronic record of patient health information generated by one or more encounters in any care delivery setting (www.HIMSS.org). Included in this information are patient demographics, progress notes, problems, medications, vital signs, past medical history, immunizations, laboratory data and radiology reports. The EHR automates and streamlines the clinician's workflow. The EHR has the ability to generate a complete record of a clinical patient encounter — as well as supporting other care-related activities directly or indirectly

via interface. This includes providing evidence-based decision support, quality management, and outcomes reporting.

Why would a healthcare organization adopt an EHR?

At a speech at George Mason University in January 2009, President-elect Barack Obama promised to computerize all of America's medical records within five years. "This will cut waste, eliminate red tape and reduce the need to repeat expensive medical tests, but it just won't save billions of dollars and thousands of jobs; it will save lives by reducing the deadly but preventable medical errors that pervade our health care system." (http://www.thestandard.com/news/2009/01/12/obama-says-all-medical-records-computerized-2014)

As identified by President Obama, there are many advantages for adapting an EHR system. Healthcare is very complex and analyzing the information from many different sources can be time consuming; preventing the clinician from fully getting the complete picture. Patients may forget they are taking medications, or that they had a test two months ago. An EHR puts the information from office encounters, hospital visits, outpatient services, laboratories, radiology and other sources into one record that can be followed, trended and easily accessed. Information from EHRs can yield a better picture for a clinician decision making.

Identified barriers for implementation by clinicians include the overall cost of the product, training, temporary decrease in productivity and hardware expenses. In May of 2008 the Congress of the United States Congressional Budget Office put a document together about the costs and benefits of Health Information Technology (IT).

"The search for improved efficiency in delivering health care has prompted numerous proposals for increasing the adoption of health IT. Two recent studies, one by Rand Corporation and one by the Center for Information Technology Leadership have estimated about $80 billion in net annual savings is potentially attributable to such technology" (Evidence on the Costs and Benefits of Health Information Technology, A CBO Paper). In addition to the long term savings, there is Electronic Health IT Stimulus money that is currently being offered to provide incentives for physicians to adopt this model.

The benefits associated with an EHR include:
• Single consolidated record accessible through continuum of care
• Legibility
• Automatic checking of prescriptions for errors in dosing, allergies and drug interactions.
• One time data entry with validation at other entries into the health care system (IE: medications, allergies, past medical history)
• Avoidance of duplicated or inappropriate diagnostic tests
• Reduction of duplicate Radiological Services.
• Reduction in the length of hospital stays
• Expansion of the practice of Evidence-Based Medicine

An EHR puts the information from office encounters, hospital visits, outpatient services, laboratories, radiology and other sources into one record that can be followed, trended and easily accessed. Information from EHRs can yield a better picture for a clinician decision making.

• Real time access to records
• More than one person can look at the same chart at the same time.
• Facilitation of patient tracking
• Clinician's ability to access patient information from home.
• Generation of data for research

The Risks associated with an EHR include:

• Security-medical staff must abide by HIPPA regulations. Accessibility to information is readily available for all clinicians.

• Costs for implementation

• Can be viewed as impersonal by staff and patients

• Extensive orientation is required

• Temporary loss of productivity

How has Cooper University Hospital become an early adopter of EHR?

Approximately 11 years ago, Cooper University Hospital (CUH) became a pioneer of adapting Computerized Physician Order Entry (CPOE) when TDS, a Clinical Information System from Eclipsys Corporation was implemented. What was unique about this endeavor was the leadership support of 100% CPOE. Even today only 30% of hospitals have 100% CPOE. This marked the beginning of our continuing journey toward an Electronic Health Record (EHR).

In 2002, CUH started on a drive to update the Clinical Information System. The initial step was to determine what product would be best for the organization. The IT department engaged 7 vendors to demonstrate their product to a multidisciplinary group. Doctors, nurses, pharmacists, physical therapists, leaders, risk management and others were invited to participate in the vendor selection. Over 50 people attended each of the sessions where each vendor had demonstrated their product with a predetermined script. Each of these vendors was required to demonstrate what was currently being utilized in other organizations; not what was coming in the future. After all the demonstrations, the scripts were tabulated and the three top vendors were defined: Cerner, Eclipsys and Epic. A group of physicians, nurses, pharmacists and IT personnel traveled to organizations that were live with each of the products. This allowed the team to determine if the Clinical System really could do what was promised. Epic became CUH's vendor of choice.

The next leg of CUH's journey was obtaining board approval for the EHR. This vital step was completed in February of 2007. The products that were purchased from Epic Systems include Clinical Documentation and orders, pharmacy, OR, Admission /Transfer/Discharge, Bed Management, Environmental Services, Ambulatory, Health Information Management and Emergency /Trauma.

In July of 2008, CUH implemented EPIC's Emergency/Trauma Bed Tracking and Triage Product with great success. In the same month, two Cooper University Physician Offices implemented Epic Ambulatory care product with equal triumph. Four weeks prior to the implementation, all Radiological, laboratory and CUH visits were populated into the EHR system. On April 30th, 2009 "Big Bang" Go Live occurred where all of the other inpatient applications were introduced. The goal was to replicate the current inpatient TDS system and roll out enhancements as the organization adopted the system.

According to the EMR Adoption Model developed by HIMMS, CUH is currently at Stage 4 (see table 1). Only 4.7 percent US Healthcare Organizations are above Stage 4. Only 15 US hospitals have reached Stage 7 and all are currently using Epic as their vendor.

What are the next steps?

CUH has identified the following as its next steps for implementation of a complete EHR (not necessarily in this order):

- ICU Module that includes device integration. This includes an integration of the bedside monitors with the EHR; allowing the clinician to download the data into nursing flowsheets.

- Advanced Clinical Documentation of inpatient nursing and physician documentation, including care plans, education charting and notes.

- Implementation at Voorhees Surgicenter, Fellowship Road and BMA for the Optime OR module.

- Implementation of the Anesthesia module

- E-Prescribing with direct feeds from Cooper to Outside Pharmacies for Prescriptions

- Continued Roll Out for all of the Cooper University Physician Ambulatory Offices

- Single Sign on in Epic Hyperspace

- Medication Bar Coding

- Scanning

- E-Signature

- Interfacing (integration) with non-Epic systems similar to lab and radiology.

The future is endless. Some projects are funded and some projects are awaiting the funds, however this is just the beginning.

The EMR Adoption Model[SM] identifies and scores hospitals using a 8 step scale that charts the path to a fully paperless environment.

Email comments to **brandon-emma@cooperhealth.edu**
or **staman-stacey@cooperhealth.edu**

References:

Evidence on the Costs and Benefits of Health Information Technology, A CBO Paper

http://www.thestandard.com/news/2009/01/12/obama-says-all-medical-records-computerized-2014

Healthcare Information and Management System Society

Table 1

EMR Adoption Model[SM]

Stage	Cumulative Capabilities	% of US Hospitals 3rd Quarter
Stage 7	Medical record fully electronic; CDO able to contribute to EHR as byproduct of EMR	0.0%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full PACS	0.6%
Stage 5	Closed loop medication administration	1.4%
Stage 4	CPOE, CDSS (clinical protocols)	2.2%
Stage 3	Clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	24.1%
Stage 2	Clinical Data Repository, Controlled Medical Vocabulary, Clinical Decision Support System (CDSS) Capability	39.1%
Stage 1	Ancillaries – Lab, Rad, Pharmacy	15.0%
Stage 0	All three Ancillaries not installed	17.6%

Source: HIMSS Analytics™ Database (derived from the Dorenfest IHDS+ Database™).
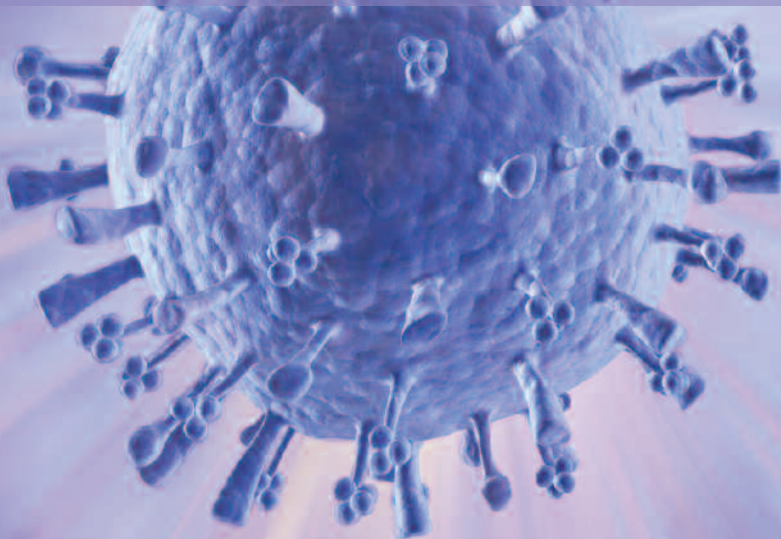*Reprinted with permission from HIMMS.*

It Starts With the Hands

Lynn Ruoss, RN, MSN, CCRN-CSC, APN

> Studies have shown that certain areas of the hands harbor high concentration of bacteria.

Healthcare associated infection (HCAI) is a major problem for patient safety and its surveillance and prevention must be the number one priority for hospitals. Since the time of Ignaz Semmilweiss in the early 1800's it has been known that hand washing could prevent the spread of infections. Semmilweiss discovered in 1847 that puerperal fever could be drastically decreased by the use of hand washing standards in obstetrical clinics (Carter, 1983). Why then, do we continue in the 21st century to have issues with hand washing compliance?

What happens with microorganisms?

Healthcare associated pathogens can not only be picked up from infected or draining wounds, but also from colonized areas of normal, intact patient skin. The perineal or groin areas tend to be the most heavily colonized, but the axillae, trunk and upper extremities, including the hands are also frequently colonized. Staphylococcus aureus, Proteus mirabilis, Klebsiella and Acinetobacter present on intact areas of the skin and diabetics, patients undergoing dialysis for chronic renal failure, and those with chronic dermatitis are particularly likely to have skin areas colonized with Staphylococcus aureus. Because nearly one million skin cells containing microorgaisisms are shed daily from normal skin, it is not surprising that patient gowns, linens, bedside furniture and other objects in the immediate environment of the patient become contaminated with patient flora (CDC, 2002).

A number of studies have been done that demonstrated the effect of hand washing and hand washing agents on HCAIs. For example, several investigations have found that HCAIs related to methicillin resistant staphylococcus aureus (MRSA) was reduced when the antimicrobial soap used for hand washing was changed. One study reported a MRSA outbreak involving 22 infants in a Neonatal Intensive Care Unit (NICU). Despite the facility's intensive effort, the outbreak could not be controlled until a new antiseptic hand cleansing agent was added. Casewell and Phillips (1991) reported that increased frequency of hand washing among hospital staff was associated with a decrease in the transmission of Klebsiella among patients.

Barriers to hand washing

Many factors have contributed to poor hand washing compliance among healthcare workers, including the lack of knowledge among personnel about the importance of contaminated hands in the spread of infection and how hands become contaminated, the amount of time required to wash hands, inaccessibility of hand washing facilities, skin irritation associated with frequent exposure to soap and water, patients' needs perceived as a priority over hand hygiene, wearing of gloves, forgetfulness, insufficient time for hand hygiene, high workload and understaffing and lack of some institution's commitment to good hand washing. Lack of knowledge of

guidelines for hand hygiene, lack of recognition of hand hygiene opportunities during patient care, and lack of awareness of the risk of cross contamination of pathogens are also barriers to good hand hygiene.

To address these barriers, The Centers for Disease Control and Prevention's (CDC's) Healthcare infection Control Practices Advisory Committee (HICPAC) published a comprehensive Guideline for Hand Hygiene in Healthcare Settings. One of the primary recommendations for this guideline was that waterless, alcohol-based hand rubs, whether they be liquid, gel or foam, was the preferred method for hand hygiene in most situations. Alcohol preparations rapidly reduce fungi and most viruses that cause HCAI, require less time to use, can be made more accessible at point of care, and cause less hand irritation and dryness with repeated use.

When compared to traditional soap and water for hand washing, alcohol rubs have many advantages: take less time to use, can be made more accessible than sinks, cause less skin irritation and dryness, and are more effective in reducing the number of bacteria on hands. However, it is important to remember that the only time alcohol based hand rubs should not be used is when the patient has clostridium difficile or when hands are visibly soiled.

Wearing gloves during patient care provides an extra measure of protection in high risk situations. However, gloves become contaminated during care and must be removed and changed when moving from a contaminated site to a clean site on a patient. Gloved hands can also become contaminated due to tiny punctures in the glove material during glove removal and therefore hand hygiene must be performed immediately after removing gloves. At least 12 % of the time, when you remove gloves, whatever microorganisms were on the outside of the gloves are now on your hands. Consequently, use of gloves is an important adjunct to, but not a replacement for proper hand hygiene.

As previously stated, studies have shown that certain areas of the hands harbor high concentration of bacteria. Healthcare Workers (HCW) who wear artificial nails are more likely to harbor microorganisms on their fingertips than those who have natural nails, both before and after hand washing. One may hear "artificial nails are real pretty and I don't think they are really a problem." However, long and artificial nails have been linked to infections that have led to death. Nail tips should be kept less than 1/4." Additionally, chipped nail polish may support the growth of larger numbers of microorganisms on the fingernails.

One of the primary recommendations for this guideline was that waterless, alcohol-based hand rubs, whether they be liquid, gel or foam, was the preferred method for hand hygiene in most situations.

It takes a village to improve poor handwashing habits. Here is how to address the naysayers you may encounter:

"I am too busy to wash my hands."
Hand washing takes 2 minutes; alcohol hand rubs take 30 seconds.

"But I was only with that patient for a minute."
Time is not the issue; contact is.

"My hands are clean."
*Clean-looking hands can still transfer organisms
— use an alcohol based hand rub.*

"Hand washing slows down rounds."
*If you were the patient, would your HCW washing
his hands be worth it to you?*

"But I did not touch the patient."
*If the environment was touched, the patient's
microorganisms were touched.*

It is up to every HCW to remind someone else to wash their hands; you have done them and the patient a big service. If someone reminds you to wash your hands, say "thank you."

Remember: hand hygiene in: protects the patient. Hand hygiene out: protects you AND the next patient.

References:

Carter, K.C., editor. Etiology, concept and prophylaxis of childbed fever. (1983). Madison: University of Wisconsin Press.

CDC. Guideline for hand hygiene in health-care settings. (2002). Atlanta: Center for Disease Control.

Casewell, M; & Phillips, I. (1977). Hands as a route of transmission for Klebsiella species. British Journal of Medicine, (2): 1315- 1317.

HUMOR: Just What the Nurse Ordered

John Bitner, RN, BSN, CCRN

An elderly woman admitted to an Intensive Care Unit (ICU) was extremely ill and her condition began to significantly deteriorate. At the request of her family a priest was summoned to the hospital to administer "Last Rites." As the Priest began to say a prayer, with nurses and doctors scurrying around the bedside, the woman suddenly opened her eyes. "Well what in the heck are you doing" she asked the priest. He responded "you want to go to heaven don't you?" "Yeah, but not today" she replied. The room erupted with laughter, and a tense situation turned into a good laugh and a great story.

Nurses and healthcare workers encounter some of the most stressful situations imaginable. From sorting through "end of life" decisions with families, working with chronically ill patients who can never escape pain, to holding the hand of a young mother as her premature baby fights for its life, stress and heartbreaking

a health prospective as well. Research done by Cindy Leonard (http://www.naturalnews.com/026311.html) demonstrates laughter can have positive effects on blood pressure, cardiovascular function, reducing stress hormones, circulation, immunity and pain control. Norman Cousins also wrote about his healing experience in a book entitled the Healing Heart: Antidotes to Panic and Helplessness (1983). He stated "I made the joyful discovery that ten minutes of genuine belly laughter had an anesthetic effect and would give me at least two hours of pain free sleep."

As a nurse in the ICU at CUH, I have come to appreciate the benefits of a genuine smile accompanied by a good laugh. A bit of humor used at the right time seems to have a calming effect, not only for the patients and their families, but for the staff as well. Family attitudes tend to have a direct correlation with the

moments are never too far from the daily routine of any nurse. One might question how a nurse deals with all of this without losing his or her sanity or "burning out." In the ICU at Cooper University Hospital (CUH), the answer to that question is unanimous; laughter.

A good sense of humor is as useful as a stethoscope in carrying out the routine tasks required of a nurse. Not only does it make grim situations more bearable, laughter makes the work place livelier, and undoubtedly contributes to the cohesiveness of a nursing unit as a whole. In addition to these benefits, research suggests that injecting a dose of humor into bedside care has significant positive effects on our patients as well. According to Wikepedia, "Laughter is an audible expression or appearance of happiness or an inward feeling of joy." Studies in neurophysiology have linked laughter with the activation of the ventero-prefrontal cortex of the brain thus stimulating the production of endorphins (the body's natural pain killers). Laughter has known benefits from

> Laughter can have positive effects on blood pressure, cardiovascular function, reducing stress hormones, circulation, immunity and pain control.

disposition of the patient. By putting families at ease, they are more likely to have a calming effect on the patient rather than exhibit a sense of dread when overwhelmed by an abyss of beeping machines. One night in the ICU a family was particularly concerned about their loved one and his lack of responsiveness. Knowing the patient was a fan of the Philadelphia Phillies, I decided to use this to my advantage. During a neuro assessment I said "sir, my name is John and I am your nurse. It is 11 pm on Friday night in the ICU, and the Phillies just beat the Mets 7-2." The patient opened his eyes and the family clearly saw him smile, and the tension in the room melted. His Glasgow Coma Score for response was increased to a 3 for "opens eyes to verbal stimuli" and the family was able to go home and get a good night sleep.

Regardless of the severity of the situation, in all likelihood someone will find a way to elicit a little laugh from everybody. Few topics seem to be "out of bounds" so to speak for health care

Perhaps the most effective use of humor and laughter is to simply enjoy ourselves.

workers. If it can be excreted, projected, smelled or heard, then it is fair game. However, it is never a patient that is laughed at, but rather a situation that invites a little escape from the reality that lies before us. Brian Roberts, a Physicians Assistant at CUH said "having a sense of humor, and being able to joke with patients and staff is sort of a healing tool, a distraction to the hardship of being in the hospital, and also gives the workday variety and makes it more enjoyable." An ICU nurse recalled a time after an exhaustive code when the attending physician asked if anyone had any other ideas for resuscitation before he ended the code. A nurse in the back answered "Yes, turn off the light." Everyone looked at this nurse a little puzzled, and than he added "maybe if we turn off the light the patient will stop going towards it." Everyone smiled and enjoyed a short lived distraction from the reality of an unsuccessful resuscitation attempt. Chelsea Sweeney, a critical care nurse from CUH commented "a sense of humor keeps me going. The more I laugh, the more I love my job. Humor keeps me from getting burnt out."

Perhaps a sense of humor is part of our subconscious "nurse's survival kit" that we carry over from nursing school. Refresh your memories for a moment. Remember the orientation speech on the first day of nursing school? "Look around, at the end of the semester many of you will no longer be sitting here" speech? Followed by long clinicals, even longer care plans and tests; leaving you to question whether you had bought the right books for that particular class. It was during that time many of us begin to develop the "nursing bond" so to speak. A bond solidified during late night study sessions among classmates all having one common goal, to pass nursing school! It was during those times that many of us learned to find the humor in this business we call healthcare. Whether it was the trauma of administering our first enema, the exhilaration of inserting a urinary catheter in the right "hole" or memorizing each others bathroom habits during long study days, many of us found common ground in the humility of being new to this profession. Mike Roach, an ICU Nurse said "most people would not understand healthcare humor. They find it hard to believe we can find humor in a Code

Blue or laugh while changing a rectal bag. They may not realize that for us this is a coping mechanism."

As tempting as it may be to follow the lead of "Patch Adams" by dressing in an angel outfit to ease the fears of a dying patient or to prepare a pool full of spaghetti for the anorexic elderly patient, there are limits on humor inside the walls of an actual hospital. Perhaps the most effective use of humor and laughter is to simply enjoy ourselves. Very few of us are natural comedians, but we all have the ability to have fun. I am reminded of the multitude of speeches given by little league coaches while I was growing up. Regardless of the team we were facing on a particular day, or the beating we may have just taken in a game, they always emphasized the importance of having fun on the field. A lesson that was difficult to embrace as a twelve year old, but one that I appreciate now that I realize the "beatings" didn't stop in little league, and in many ways become a part of everyday life. I'm glad I learned at an early age the importance of having fun regardless of the scoreboard. According to Dr. Clifford Kuhn (the laugh doctor), professor of psychiatry at the University of Louisville School of Medicine, there is a significant difference between being funny, and having fun. "The best way to reverse our humor attitude is to recognize that there's a big difference between being funny and having fun. Being funny is just a small part of fun, and sometimes it's not even fun. Its hard work, and sometimes it's inappropriate or hurtful to people. A lot that goes into being funny is risky. Having fun, on the other hand, is not a behavior or a performance. It's an attitude of willingness to look for the positive element in any situation, no matter how dire it is. If we can get hold of that attitude, we discover that it's possible to have more fun anytime, anywhere."

A few months ago I took care of a terminally ill cancer patient. During endless treatments of plasmapheresis and multiple stints on and off the ventilator, she became a prisoner to the walls of the ICU. Most of the ICU staff had cared for this patient at some point during the last month. On a Friday evening before the change of shift, I went to visit her knowing she was being discharged to home on hospice care later that night. As I approached the room I could not believe my eyes. Inside the room there was a group of nurses and critical care technicians dancing as the song her husband was playing echoed into the hallway. "Do a little dance, make a little love, get down tonight" Countless doses of Dilaudid accompanied by every palliative therapy we could offer could never elicit the response I saw as she watched a bunch of goofy nurses show off their dancing skills; a smile. I realized that the people in her room had just become the best medicine a hospital could offer her. I stopped and thought about all I had been through with the patient and her family over the past month, the agonizing days and nights, the vigils at her bedside. Then, I opened the door, threw up my arms, and "did a little dance."

Email comments to **bitner-john@cooperhealth.edu**

References:

http://www.naturalnews.com/026311.html)

Cousins, N. (1983). The Healing Heart: Antidotes to Panic and Helplessness, New York: Norton, 1983.

Cousins, N. Anatomy of an illness as perceived by the patient: Reflections on healing and regeneration, introd. New York: Norton, 1979http://www.dr-cliffordkuhn.com/meet.html

The effect of comprehensive infection control measures on the rate of late onset infection in very low birth weight infants.

Linda Wicker RN, MSN, CCRN, Emma Brandon, RNC, BSN, MHA,
Sulaiman Sannoh MD, Judy Saslow MD, Gary Stahl, MD, Nicole Kemble RHIT and
Zubair H Aghai MD, Kee Pyon PhD
Pediatrics/Neonatology, Cooper Hospital-UMDNJ-Robert Wood Johnson Medical School, Camden, NJ

Background:

Late onset infection (after 3 days of life) is a significant problem in very low birth weight (VLBW) infants (birth weight ≤1500 grams) and can lead to increased mortality and morbidity. The incidence of late onset infection in VLBW infants in the Neonatal Intensive Care Unit (NICU) at Cooper University Hospital (CUH) was > 35% before 2004, much higher than 20% reported in other studies. A comprehensive infection control measure was introduced in 2004 to decrease the late onset infection rate in the NICU. Our objective was to study the effects of comprehensive infection control measures on the rate of late onset infection in VLBW infants.

Hypothesis:

Comprehensive infection control measures decrease the rate of late onset infection in VLBW infants

Material and Method:

VLBW infants who were born between January 2001 and December 2004 (pre-intervention group) were compared with infants who were born between January 2005 and December 2008 (intervention group). Late onset infection was defined as a positive blood and/or CSF culture after 3 days of life. Demographic and clinical data were collected from infants' medical records. The two groups were compared for baseline demographics, risk factors for infection and the rate of late onset infection. The two groups were compared by Student t-test and Mann-Whitney U test for continuous data and chi-square or Fisher's exact test for categorical data.

Results:

350 VLBW infants were admitted to NICU during pre-intervention period and 315 during intervention period. There was no significant difference in baseline demographics and risk factors for late-onset infection {birth weight, gestational age, sex, race, prenatal steroids, prenatal antibiotics, prolong rupture of membranes, APGAR scores, duration of central lines, duration of total parenteral nutrition (TPN), postnatal steroids and mechanical ventilation} between the two groups. The incidence of late-onset infection was significantly reduced from 36% before intervention to 22% with intervention (p<0.001).

Conclusion:

Comprehensive infection control measures significantly reduced the rate of late onset infection in VLBW infants. An infection rate of 21 percent or less is used as the benchmark value of over 800 neonatal intensive care units participating in the Vermont Oxford Data base. For the 2009 year thus far, CUH's NICU is reporting less than 10 percent rate of late onset infections in the very low birth weight infant population.

	Pre-intervention Group (n = 350)	Intervention Group (n = 315)	*p*
Birth Weight (grams)	1020 ± 281	1005 ± 317	0.5
Gestational Age (weeks)	27.8 ± 2.8	27.7 ± 3.0	0.7
Mechanical Ventilation (days)	21.8 ± 27.6	21.2 ± 29.4	0.8
Duration of Central Lines (days)	22.1 ± 17.1	21.4 ± 18.1	0.7
Duration of TPN (days)	21.8 ± 17.9	20.9 ± 19.6	0.6
Late Onset Infection (%)	126 (36)	69 (21.9)	<0.001

(continued)

The comprehensive infection control measures introduced to the NICU in 2004:

Education

• Hand washing campaign by hanging hand washing posters/signs in and outside the unit including at each computer station. Instituted the 2-minute hand scrub with Chlorohexidine soap. Placed clocks at the scrub sink to ensure accurate timing of 2-minute hand scrub.

• Intravenous practice guidelines and education program for all NICU staff members. Re-educated all NICU staff on sterile technique for IV starts and maintenance. Revised Policies and Procedures-All IV's hangings are bundled and arranged using sterile technique and sterile barriers.

• Focused education for new residents

• Implemented mandatory Infectious Disease NICU RN staff education

• Reinforced physician education for early feeding with breast milk

• Developed mandatory learning packets for all pool and agency nurses to be completed in 30 days.

Environmental

• Environment of care: through scheduled equipment and unit specific cleaning, applied key board covers on all computers

• Obtained individual bedside stethoscopes

• Banned the staff from wearing engagement rings and artificial nails

• Revised unit visitation policy

• Replaced counter mounted corian sinks with free standing ceramic sinks (corian sinks had an apron that would collect standing water)

• Instituted daily bleaching of all sinks (Serratia was incubated in the sinks)

• Individual bedside bandage scissors and hemostats

• Instructed Unit Secretary/Nurse Associates on protocol for bedside use and sterilization of instruments between infants

• Eliminated all food and drink from direct patient care areas.

• Completed process flow redesign for intravenous insertion, maintenance and mixing of IV medications

• Implemented use of Styrofoam containers to warm formula/breast milk with infants name identified on container

• Removed all stuffed animals from beds

Email comments to **wicker-linda@cooperhealth.edu**

References:

Bergman, C. (2006). Nurses Empowerment through a Clinical Ladder Program. Oncology Nursing Forum, 33(2), 475.

Cole, D. A., & Burwell, K. T. (2007). A Revised Nephrology Nurses' Clinical Ladder. Nephrology Nursing Journal, 34(2), 243.

Pettno, P. (1998). A four-level clinical ladder. Nursing Management, 29(7), 52-53.

REFLECTIONS: A NURSING JOURNEY
Stepping Onto the Professional Ladder

Lucy Suokhrie RN BC, BSN MSHCA

I joined Cooper University Hospital (CUH) in the summer of 2001. I worked my scheduled shifts and was not involved in any committees on my unit or the hospital. Even though I liked what I did, the sense of accomplishment and satisfaction was missing. I realized that I needed to do something more. I found out about the professional ladder from a co-worker, who was on the ladder. Like many nurses, my first reaction was "it's too complicated, and I can earn that money working overtime." I was afraid to take the next step. My manager Dianne Moore encouraged me and finally in 2004 I applied for the professional ladder. Once I took that step, I never looked back. I realized that the activities and committees I was involved with both on and off the unit could earn me ladder points.

Professional ladders were first introduced in the 1970's as a means to recruit, reward and recognize bedside nurses. One major benefit of professional ladder programs is improved retention. Nurses who excel clinically and are acknowledged and rewarded for their achievements are less likely to leave for a competitive job offer. Additional incentives are improved patient outcomes and patient satisfaction as well as differentiating the level of competence of bedside nurses (Cole & Burwell, 2007). Benefits of a professional ladder system can include validating staff nurse competence, enhanced responsibility and commitment to the organization; promotion of self-value and positive ethics, and creating a clinical learning climate during the process of promoting professional growth (Pettno, 1998). Since I have been on the professional ladder I have grown professionally. I furthered my education and have received a Masters degree in Health Care Administration. Last year I took another step, and passed my board certification exam for Psychiatric and Mental Health Nursing. In addition, I joined the American Psychiatric Nursing Association and I am currently involved in the following professional activities at CUH:

- Epic Nursing Advisory Council
- Epic Super user
- Magnet Steering Team
- Magnet Unit Representative for Psychiatry
- Unit Council
- Research Mentor for adult inpatient Psychiatry

Being on the professional ladder gives me job satisfaction. I have grown professionally and have developed personal relationships with other nurse colleagues. The monetary compensation is definitely an encouragement; however, the desire to improve myself and the motivation to meet new challenges is very satisfying. Participation on the professional ladder allows nurses to gain empowerment through committee participation, community involvement, writing policies, and sharing their expertise with colleagues. Professional ladder's can advance the profession of nursing and can benefit the organizations and communities where nurses work. A survey of current ladder nurses was conducted to examine the reasons why they entered and completed the program. With a 100% response rate, 37% listed increased knowledge base, 32% listed self-improvement and 31% reported financial incentive as motivation for completing the program (Bergman, 2006). The nurse's involvement in education, community and professional organizations provided them the opportunity to accomplish this. A professional ladder can increase problem solving and decision making skills, enhance clinical skills, improve interpersonal relationships and increase self confidence enabling nurses to initiate change in their practice environment (Bergman, 2006).

The professional ladder has changed my outlook and attitude towards my work and co-workers. Over and above the monetary benefits, the larger goal I set out to achieve was the opportunity to contribute to the organization and improve the healthcare system, by getting involved. I believe that every nurse is capable of being on the professional ladder. The only thing that separates nurses from the professional ladder is 'applying for it'. So like the Nike commercial says, "Just do it"!

Email comments to **suokhrie-lucy@cooperhealth.edu**

References:

Bergman, C. (2006). Nurses Empowerment through a Clinical Ladder Program. Oncology Nursing Forum, 33(2), 475.

Cole, D. A., & Burwell, K. T. (2007). A Revised Nephrology Nurses' Clinical Ladder. Nephrology Nursing Journal, 34(2), 243.

Pettno, P. (1998). A four-level clinical ladder. Nursing Management, 29(7), 52-53.

Professional News

DEGREES:

Kate Wood, RN BSN Thomas Jefferson University in May, 2009

Roxanne Berger, LPN Jerrothia Riggs at Camden Board of Education in May, 2009

CERTIFICATIONS:

Christina Malatesta, RN, BSN, CCRN
received certification in Critical Care Nursing

Rick Rohrbach, RN, MICP, CEN, CCRN
received certification in Critical Care Nursing

Debra Williams, RN, MSN, CCRN
received certification in Critical Care Nursing

PRESENTATIONS:
Nursing Grand Rounds

Kathleen Yhlen RN MSN NE-BC *"The Effect of a Nurse Externship Program on the Perceived Autonomy of Student Nurses."* Poster presentation: National Nurses Staff Development Organization Annual Convention. Philadelphia, PA July 10-12, 2009.

Sharon Byrne MSN, APN,C, NP-C, AOCNP Advanced practice nurse with the Cooper Cancer Screening Project, Division of Hematology/Oncology co-presented at the NLN Education Summit 2009, Exploring Pathways to Excellence in Clinical Education held on September 23-26, 2009 in Philadelphia. The session was titled *"Problem Based Learning: innovative learning strategy for adult health."* Sharon is also an Associate Clinical Professor at Drexel University, College of Nursing.

Carole-Rae Reed, PhD *"From zero to sixty in 2 years: Staff Nurses in Research."* Poster presentation: NJ Organization of Nurse Executives Annual Research Day 2009 and Nursing Management Conference 2009.

APPOINTMENTS:

Leanne Mader, RN, BSN, CCRN Staff Nurse ICU; Appointed as RN Representative to Cooper University Hospital Board of Trustees

AWARDS:

Kate Wood, RN, BSN
Inducted into Sigma Theta Tau in May, 2009

Evelyn Robles-Rodriquez, RN, MSN, APN
Honored by the American Cancer Society: South/Central New Jersey Chapter as a honoree at the celebration of hope Event in August, 2009

PUBLICATIONS:

"Choosing an Information System: Best Practices" OR Nurse, March 2009
Ruth MacGregor, RN, BSN, MBA, CNOR

"Supporting Breastfeeding" Developmental Monitor, Official Newsletter of NIDCAP
Deborah Schoch, RNC, MSN, IBCLC, CCE, CPST

LADDER APPOINTMENTS:
2nd Quarter 2009
Level 3

Lindsay Leuceri, RN	PCU
Kim Potorte, RN, BSN	SDS
Lisa Passero, RN	SDS
Marion Pensabene, RN	Endo
Racquel Pineda, RN, BSN	NICU
Ann McKenney, RN	S7
Barbara Murphy, RN	L&D
Kelly Ann Carter, RN	L&D
Doreen DiSimone, RN, BA	SDS

Level 4

Rochelle Cantiveras, RN, BSN	M/I
Lisa Replogle, RN, MSN	Cath Lab
Debbie Orr, RN, MSN	Cath Lab
Mary Beth Palkon-Krytzer, RN, BSN	CCU
Diane Fletcher, RN,CCE,CLC	L&D/MICU
Patricia Reitman, RN, CAPA, CPAN	PACU
Patricia Budic, RN, CGRN	EDNO

Kathy Baitinger, RN, CGRN	Endo
Christine Wadhen, RN	Endo
Dale Ann Beloff, RN,RNC	NICU
Jane Hasson, RN, RNC	NICU
Elaine Helmer, RN, BSN	Cath Lab
Susan Hoffman, RN, CCRN	TICU
Alethis Morris, RN, BSN	TICU
Regina Chavous-Gibson, RN, BS,	L&D
Kim Serafina, RN, CCRN	PACU/VSC
Jennifer Siligrini, RN, BSN	PCU
Rose Marie Maitland, RN, BSN, CCRN	ICU
Maria Eastlack, RN, BSN	SPU

Level 5

Lisa McKeeby, RN, BSN, CRNT	SPU
Beth Sherman, RN, BSN, CEN	ED
Donna Wood, RN, BSN, RNC	NICU
Lorraine Pugh, RN, BSN, CEN	ED
Janine McNamara, RN, BSN, CGRN	CDH
Christine Ward, RN, BSN, RNC	M/I
Barbara Wenning, RN, BSN, RCIS	Cath Lab

Level 6

Michelle Denise Basile, RN, MSN, CCRN, RNC	NICU
Precy Dsouza, RN, MSN, PCCN	PCU
Lucy Suokhrie, RN-BC, BSN	Psych

RESEARCH:

The following trauma nurses completed a research study entitled "The Impact of a central line insertion checklist on staff compliance with established policies."
Adrienne Bell, RN; Deborah Cannon, RN; Jamie Eisele, RN; Susan Hoffman, RN, CCRN; Patricia Osterheldt, RN; Alethia Mimm, BSN; Christine Kelly, RN, Stacey Staman RN, MSN, CCRN, Mary LaChant RN, MSW/MPA.

Cooper
University Hospital

c/o The Cooper Health System
3 Executive Campus, Suite 240-B
Cherry Hill, New Jersey 08002