Hospital Patient Safety News

Summer 2012

A Newsletter for Hospital Staff Participating in IPRO's Patient Safety Initiative

www.ipro.org

Welcome to the Summer 2012 quarterly issue of IPRO's *Hospital Patient Safety News.* In this edition, we present information on upcoming events, articles of interest, and educational resources related to the Centers for Medicare & Medicaid Services (CMS) Healthcare Associated Infections (HAI) Prevention Initiative. If you have a best practice, tool, or resource that you would like us to feature in a future issue, please forward the information to Teré Dickson, MD, MPH at tdickson@nyqio.sdps.org. Subscriptions to this newsletter can be requested by email to Susan Ulmer at sulmer@nyqio.sdps.org.

Your comments are valuable for improving our newsletter. Please share your input with us in this brief questionnaire: www.surveymonkey.com/s/YL2RZZG

News You Can Use

Determining the Source of Fever in Patients with More Than One Potential HAI

March 2012. *NHSN e-News* addresses a commonly asked question on Healthcare Associated Infection (HAI) definitions containing the phrase "no other recognized cause." This phrase aims to explain symptoms related to a specific infection. For example, dysuria, urgency, costovertebral angle tenderness, and suprapubic pain are symptoms specific to urinary tract infections. Fever, on the other hand, is a non-specific sign that can be attributed to more than one type of infection at the same time. If more than one type of infection is suspected at the time of fever, then facilities cannot determine which infection actually caused the fever. In this case, both types of infections must be reported if all other criteria besides fever are present and surveillance for both HAIs is being performed. For an in-depth explanation, read: www.cdc.gov/nhsn/PDFs/Newsletters/NHSN-NL-March-2012.pdf. For other *NHSN e-News* issues, go to: www.cdc.gov/nhsn/newletters.html.

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Hospitals Turn to UV Markers to Fight Infections

May 2012. Vancouver Island Health Authority (VIHA) uses an ultraviolet (UV) marking system to make significant improvements to cleaning hospital surfaces. The system

follows guidelines developed by *Safer Care Now,* an initiative of the nonprofit Canadian Patient Safety Institute. An invisible fluorescent material is applied to ten "high-touch" locations within a patient room, such as the light switch or toilet handle, to assess whether or not those areas have been cleaned properly. Testers return to the room 24 hours after application and use hand-held UV lights to see if the markers have been wiped clean. This system raises environmental staff awareness and improves cleaning practices, showing an increase of scores from 20 percent to 80-90 percent on the first round. Dr Michael Gardam, Director of Infection Prevention and Control with Toronto's University Health Network and contributor to Safer Care Now, recommended the UV cleaning audit as an inexpensive and easy tool that is most successful when the staff has a part in initiating the system and tracking its results. For more information see: http://m.theglobeandmail.com/news/national/british-columbia/in-bc-hospitals-turn-to-uv-markers-to-fight-infections-like-c-difficile/article2437721/?service=mobile.

History of Skin Infection Increases Patient's Risk of Developing Surgical Site Infections

May 2012. *News-Medical* reported that new research from Johns Hopkins reveals that patients with history of a single skin infection may be three times more likely to develop a surgical site infection (SSI). The *Annals of Surgery* study analyzed data for 613 patients with an average age of 62 who underwent cardiac surgery, vascular surgery, neuro-surgery or spinal surgery. Around 22 percent of patients had a history of skin infection. Within 180 days of surgery, 24 patients developed an SSI, and five died from the condition. Another 15 patients died from noninfectious causes. Of those who had a history of skin infection, 6.7 percent got an SSI compared with 3.9 percent of those without a history of skin disease. It made no difference whether the skin infection was recent or had occurred years earlier. "What this research suggests is that people have intrinsic differences in how susceptible they are to infection and that we need to know their skin infection histories," says study leader Dr. Nauder Faraday, an associate professor of anesthesiology and critical care medicine at the Johns Hopkins University School of Medicine. Read more: www.news-medical.net/news/20120530/Patients-with-history-of-skin-infection-more-likely-to-develop-surgical-site-infections.aspx.

Patient Corner

Joint Commission Announces SAFE CARE Campaign

February 2012. The Joint Commission announced its *SAFE CARE* Campaign would be launched during March Patient Safety Awareness Week. The 2012 SAFE CARE Patient Safety Education Program helps healthcare organizations educate patients and families on their role in ensuring safer healthcare. The program includes instant smart-phone access to SAFE CARE's safety video library, including nine short videos from the Joint Commission's SPEAK UP™ campaign, Centers for Disease Control, Kimberly-Clarke, The Patient Channel® from The Wellness Network, and the SAFE CARE campaign on topics such as medication errors, falls prevention, hand hygiene, and infection prevention. To learn more about the campaign, visit: www.jointcommission.org/new_safe_care_program_to_provide_patient_education. To order free posters and customize videos for your organization at a nominal fee, go to: www.safecarecampaign.org/poster/welcome.html.

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CUSP Corner

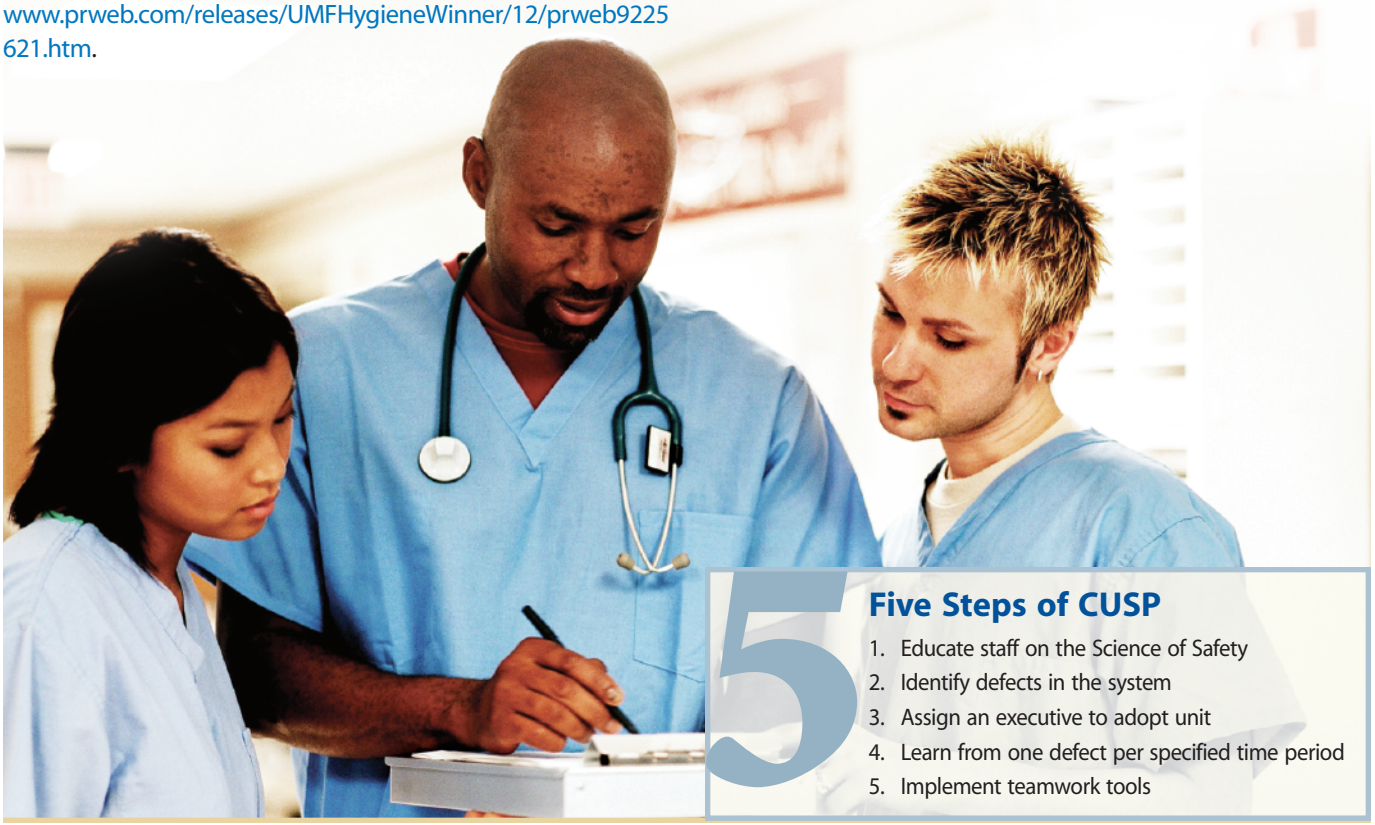
The Comprehensive Unit-based Safety Program (CUSP) offers a variety of tools and techniques to help clinical teams identify and resolve patient safety issues at the unit level. The five-step program features a structured strategic framework for safety improvement that also empowers staff to take charge and address identified safety hazards. To learn more about CUSP visit: www.onthecuspstophai.org.

Hospital Recognizes Staff with Hygiene Specialist™ Excellence Award

February 2012. Regional Medical Center in Orangeburg, SC awarded Karen Keitt, one of its environmental services staff with their second annual Hygiene Specialist™ Excellence Award. This award is sponsored by UMF Corporation, the developer of PerfectCLEAN® Environmental Hygiene System, in order to acknowledge the contribution of environmental services as the "first line of defense" against healthcare associated infections. Keitt, a Brooklyn, NY native who started working with Regional Medical Center in 2005, has become a leader amongst her coworkers and a favorite in every area of the medical center, with 100% scores on her performance. As the recipient of this year's Hygiene Specialist™ Excellence Award, she accepted an all-expense paid vacation for two to South Beach, FL. To find out more about the award, UMF Corporation and Regional Medical Center, go to: www.prweb.com/releases/UMFHygieneWinner/12/prweb9225621.htm.

More Communication Leads to Better Patient Safety

May 29. *Healthcare Finance News* reports that hospitals with the highest patient ratings for physician and nursing communications have fewer patient safety issues. A new HealthGrades report analyzed patient safety data for hospitalizations between 2008 and 2010 and found that better communication among staff members led to fewer pressure ulcers and fewer inpatient deaths with treatable complications, among other patient safety events. The study shows that in hospitals performing in the bottom 10% for physician communication, 15% more events occurred than in hospitals performing in the top 10%. Additionally, in hospitals performing in the bottom 10% for nursing communication, 27% more events occurred than in those performing in the top 10%. Researchers also found that at hospitals performing in the top 10% for patient satisfaction, 13% more patients reported they received discharge instructions than at those scoring in the bottom 10%. Based on the data, HealthGrades estimates that 254,000 patient safety events among Medicare beneficiaries could have been prevented, and 56,367 beneficiaries who died experienced one or more of these events. Read more: www.healthcarefinancenews.com/news/healthgrades-more-communication-hospitals-leads-better-patient-safety.



5 Five Steps of CUSP

1. Educate staff on the Science of Safety
2. Identify defects in the system
3. Assign an executive to adopt unit
4. Learn from one defect per specified time period
5. Implement teamwork tools

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Small Steps to Success

Partners Hold Handwashingforlife Forums

Handwashingforlife Heathcare Forums were held in May with ten of IPRO's participating partners: St. Luke's-Roosevelt Hospital Center, Kings County Hospital Center, Flushing Hospital Center, St. Elizabeth Medical Center, Orange Regional Medical Center, Vassar Brothers Medical Center, Ellis Hospital, Putnam Hospital Center, Rome Memorial Hospital, and St. James Mercy Hospital. Handwashingforlife Institute is a global organization devoted to addressing common hand hygiene challenges and reducing the incidence of nosocomial infections and foodborne illnesses. The forums reviewed and assessed facilities' existing hand hygiene programs and provided interactive presentations and exercises to help teams improve their hand and surface hygiene practices. The forums were well received as participants enjoyed the "interactive" hand washing demonstrations, "realistic" scenarios, "NICU animations", and "realtime cleaning info" that "made [them] re-think" their hand hygiene behaviors. Forum members now have access to additional tools and materials on www.handwashingforlifehealthcare.com.

Hospitals Gather to Share Innovative Q.I. Practices at Spring 2012 LAN Meetings

IPRO held its Spring Learning and Action Network (LAN) Meetings on May 1st and 3rd. The LANs offered an overview of Antimicrobial Stewardship by Dr. David Calfee, Chief Hospital Epidemiologist at New York-Presbyterian Hospital/Weill Cornell Medical College and former Chair of Patient Safety and Quality Improvement Committee, Society for Healthcare Epidemiology of America (SHEA). Hospital panel presentations and discussions allowed participants to hear various approaches and solutions to catheter associated urinary tract infections (CAUTI) and central line associated blood stream infections (CLABSIs).

Participants were encouraged to share their experiences and network with one another during table top discussions. The half day conference concluded with an introduction to the IPRO Healthcare Associated Infections Prevention website (hai.ipro.org) by Dr. Teré Dickson, Medical Officer. Attendees "received many wonderful suggestions to take back to homebase" and felt "the session was very informative and helpful. The tools used, sessions, and speakers will help me apply to my units to make a change and improve patient outcomes". All materials from the LAN can be found at www.ipro.org/index/hai-pe.

May 1, 2012 Manhattan LAN meeting, The New Yorker Hotel. Dr. Dickson presents hai.ipro.org website

May 3, 2012 Rome LAN Meeting, Rome Memorial Hospital. Attendees share solutions during tabletop discussions.

Hospital Patient Safety News welcomes stories from our readers. If you have a success story you would like to share in our newsletter, please contact Teré Dickson, MD, MPH at tdickson@nyqio.sdps.org.

http://hai.ipro.org

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SPECIAL ARTICLE

Proton Pump Inhibitors Linked to *Clostridium difficile* Infection

By: Emily Johnson Pharm. D Candidate 2012

Healthcare associated infection (HAI) prevention is a critical issue facing today's healthcare providers. In the past few years, rates of overall HAI have declined and more hospitals are following infection prevention best practices.[1] Paradoxically, rates of *Clostridium difficile* infection have skyrocketed to historically high levels, causing diarrhea linked to 14,000 American deaths each year.[2] Recently, the Food and Drug Administration released a statement informing the public that therapy with any proton pump inhibitor (PPI) predisposes patients to contracting *Clostridium difficile*. The FDA is currently reviewing evidence regarding other types of acid suppressing medication and will make a separate announcement regarding that information.

Commonly used PPIs:

- **omeprazole** - Prilosec®, Zegerid®
- **esomeprazole** - Nexium®
- **lansoprazole** - Prevacid®
- **dexlansoprazole** - Dexilant®
- **pantoprazole** - Protonix®
- **rabeprazole** - Aciphex®

PPIs are very effective at reducing the amount of acid the stomach produces, making them ideal for short-term use to prevent or to help heal acid erosions in the stomach lining. The most common indications for PPI use are peptic ulcer disease (PUD) and gastroesophageal reflux disease (GERD). An unintended side effect of this treatment is allowing higher numbers of bacteria to pass through the stomach into the small intestines. At normal acid levels, the stomach kills off large numbers of bacteria which helps prevent infection.

PPIs are very widely used, but are of questionable benefit for stress ulcer prophylaxis (SUP) in patients who are not acutely ill or in an intensive care unit.[3-5] In addition, many GERD patients on chronic PPIs can tolerate dose decreases or discontinuation without any reoccurrence of symptoms.[5]

Antibiotic use has been clearly associated with an increased chance of contracting *Clostridium difficile* infection (CDI) and evidence has been building for some years to associate PPI use with CDI. For antibiotics that have a high risk of causing CDI, the additional use of PPIs makes little difference. But in

antibiotics that have low rates of CDI the additional use of PPIs greatly increases the risk of CDI.[6] Institutional antimicrobial stewardship program should develop and implement policies for reducing the risk of CDI due to PPIs.

Data for the year 20118*:

- $59 million prescriptions filled for omeprazole—the 6th most dispensed medication in America.
- $150 million prescriptions filled for medications in the acid suppressant class.
- $10.1 billion spent on prescription medications in the acid suppressant class.

* Does not include over-the-counter acid suppressants.

What can be done to help?

Administration can develop a hospital-wide acid suppressant policy[7] developed in conjunction with the antimicrobial stewardship program, advising staff of the need for:

- Cautious prescribing of PPIs for SUP,[3,7] indicated for patients at high risk of bleeding and only during acute-care hospitalization;[5]
- Cautious prescribing of PPIs for dyspepsia—helpful in the short-term—considering discontinuation after two weeks in asymptomatic patients;[3]
- Discontinuation using step-down methods, or switching to "as needed" two-week courses—both evidence-supported options;[5]

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PPIs Linked to CDI

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- Consideration of withholding PPI treatment while on antibiotics;[6,7] and
- Choosing alternatives to PPIs whenever possible. Histamine-2 receptor antagonists (ranitidine, famotidine) are associated with lower CDI risk vs. PPIs.[9]

Staff can educate patients taking PPIs about:

- Considering preventative measures when traveling to areas where travelers' diarrhea is common;[3]
- Exercising care in eating foods at higher risk for contamination (undercooked ground beef, unpasteurized milk or cheese, or moist foods served at room temperature);[3] and
- Avoiding consumption of substances known to increase gastric acid production or irritation of the stomach lining, i.e., caffeine, citrus fruits, tomatoes, nicotine, mints, and alcohol.

References:

1. US Department of Health and Human Services. Monitoring Progress Toward Action Plan Goals: A Mid-Term Assessment. *National Targets and Metrics*. 2011. Available at: www.hhs.gov/ash/initiatives/hai/nationaltargets/index.html.
2. Centers for Disease Control and Prevention. Making Health Care Safer: Stopping C. difficile infections. Vital Signs. 2012;(March):1–4. Available at: www.cdc.gov/vitalsigns.
3. Bavishi C, Dupont HL. Systematic review: the use of proton pump inhibitors and increased susceptibility to enteric infection. *Alimentary pharmacology & therapeutics*. 2011;34(11–12):1269–81. Available at: www.ncbi.nlm.nih.gov/pubmed/21999643. Accessed March 30, 2012.
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9. Kwok CS, Arthur AK, Anibueze CI, Singh S, Cavallazzi R, Loke YK. Risk of clostridium difficile infection with acid suppressing drugs and antibiotics: meta-analysis. *Am J Gastroenterol*. 2012 Apr 24. doi: 10.1038/ajg.2012.108. [Epub ahead of print]

Antimicrobial Stewardship Program Resources

- Centers for Disease Control and Prevention: www.cdc.gov
- Infectious Diseases Society of America: www.idsociety.org
- Society for Healthcare Epidemiology of America: www.shea-online.org
- Society of Infectious Disease Pharmacists: www.sidp.org

Healthcare Associated Infections and Patient Safety Research

Alexander, E.L., Morgan, D.J., Kesh, S., et al. (2011). "Prevalence, persistence, andmicrobiology of *Staphylococcus aureus* nasal carriage among hemodialysis outpatients at a major New York hospital." (AHRQ grant HS18111). *Diagnostic Microbiology and Infectious Disease* 70, pp. 37–44.

Having *Staphylococcus aureus* present in the nose is a major risk factor for more invasive infection, as well as the spread of the bacteria from one person to another. The purpose of this study was to determine the factors related to *S. aureus* nasal colonization in hemodialysis patients. The researchers found that nasal carriage in dialysis patients was both limited and transient. However, having HIV infection was associated with persistent nasal colonization.

Mainous, A.G., Diaz, V.A., Matheson, E.M., et al. (2011). "Trends in hospitalizations with antibiotic-resistant infections: U.S., 1997-2006." (AHRQ Contract No. 290-07-10015). *Trends in Public Health Reports* 126, pp. 354–360.

Hospitalizations associated with antibiotic-resistant infections have become more common over a recent 2-decade period, especially among young patients, reveals a new study. Since the 1990s, increased resistance to antibiotics has been found for a variety of pathogens. The emergence of vancomycin-resistant enterococci and methicillin-resistant *Staphylococcus aureus,* initially in hospitalized patients and later in the community, has made it difficult to treat infections with these resistant organisms.

Ward M.M., Clabaugh, G., Evans, T.C., and Herwaldt, L. (2012). "A successful voluntary, multicomponent Statewide effort to reduce health care-associated infections." (AHRQ Contract No. 290-06-00021). *American Journal of Medical Quality* 27(1), pp. 66–73.

The authors describe a Statewide multi-component approach to reduce health care-associated infections (HAIs) in Iowa. The Iowa Healthcare Collaborative's success in developing a Statewide voluntary reporting system, and in significantly improving the rate of influenza immunization among health care workers demonstrates that a committed collaborative can effectively mobilize hospitals to implement HAI prevention and control measures.

Upcoming Events

IPRO WebEx Schedule

Tuesday, July 10 • 1:00PM EST: **Antimicrobial Stewardship**

Conferences of Interest

October 27-31: **Prevention and Wellness Across the Lifespan**
American Public Health Association 140th Annual Meeting & Expo
American Public Health Association (APHA)
San Francisco, CA
www.apha.org/meetings/highlights

August is National Immunization Awareness Month.

Access resources at
www.cdc.gov/vaccines/events/niam/default.htm
to plan your event.

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About IPRO

Through its work as the Medicare Quality Improvement Organization for New York State, IPRO targets the quality of healthcare provided to the State's more than three million Medicare beneficiaries. A not-for-profit, independent organization, IPRO supports providers across the state with evidence-based, clinical interventions and objective expertise to improve healthcare processes and patient care.

For more information about IPRO, please visit www.ipro.org.

The Hospital Patient Safety Staff at IPRO

Karline Roberts, MA, Director of Hospital Projects
kroberts@nyqio.sdps.org

Teré Dickson, MD, MPH, Medical Officer
tdickson@nyqio.sdps.org

Bill Gardiner, CPHQ, Senior Quality Improvement Specialist
wgardiner@nyqio.sdps.org

Chad Wagoner, MPH, Quality Improvement Specialist
cwagoner@nyqio.sdps.org

Crystal Isaacs, MPH, Quality Improvement Specialist
cisaacs@nyqio.sdps.org

Corporate Headquarters
1979 Marcus Avenue
Lake Success, NY 11042-1072
(516) 326-7767
www.ipro.org

Regional Office
20 Corporate Woods Blvd.
Albany, NY 12211-2370
(518) 426-3300
www.ipro.org

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