

Public Reporting of Healthcare Associated Infections

Kentucky Interim Joint Committee on Health & Welfare -- December 19th, 2011

Kevin T Kavanagh, MD, MS, FACS
Health Watch USA

'Doug Leonard, President of the Indiana Hospital Association, said the industry needs to "embrace transparency. Sometimes we don't like the results of that, but I think transparency is good for us and good for the public." Even if the data are off by 50 percent or more, Leonard said, "it really doesn't matter, because one injury or one error is wrong," and hospitals should focus on preventing errors rather than disputing the numbers.'

-- Courier Journal June 12, 2011

This presentation expresses the views and opinions of
Kevin T Kavanagh, MD, MS, FACS.

Healthcare Associated Infections

One of the top 10 leading causes of death in the United States

<http://www.ahrq.gov/qual/hais.htm>

Kevin T Kavanagh, MD, MS, FACS

Size of Problem

- 1 in 20 U.S. Hospital Patients Develop a HAI.
- 1.7 Million Infections, Nearly 100,000 Lives Lost Each Year. Equal to a Boeing 767 crashing every day.
- Kentucky – An annual cost of almost 400 million dollars & almost 1400 lives lost from 23,000 HAI.

Size of the Problem – HAI causes as many deaths as motor vehicle traffic accidents, breast cancer and HIV/Aids combined.

Four Pillars of Control

- 1) Adherence to Evidence-Based Prevention Practices.
- 2) Align incentives
- 3) Innovation Research
- 4) Data For Action

Marked Reductions Can Be Achieved

Expected Achievable Reductions:

- CLABSI (Central Line Blood Stream Infections) 65% to 70% (Some have achieved zero)
- CAUTI (Catheter Associated Urinary Tract infections) 65% to 70%
- VAP (Ventilator Associated Pneumonia) 55%
- Surgical Site Infections 55%

Not implementing protocols to achieve these results means unnecessary lives lost.

Source: Umscheid, et al. Infection Control and Hospital Epidemiology, Feb. 2011

<http://www.ncbi.nlm.nih.gov/pubmed/21460463>

Data For Action

- Community Problem – Health Department Engagement, Data for Grants.
- Motivate Facility Improvement. Similar to School Standardized Testing. Community can follow improvement in their facility.
- Motivate Changes in Community Behavior.
- Antibiotic Overutilization. HWUSA Op-Ed with the CDDEP:
http://www.cddep.org/blog/posts/outpatient_antibiotic_utilization_highest_west_virginia_and_kentucky

Data For Action

- Roger Wagner, Pike County, Ky, School Superintendent:
"We need some way of reporting. Particularly our school system needs to know if this exists out there. For a parent to call me and say, 'do we have an outbreak of MRSA in Pike County?' If I can't identify it. A couple of them have called me personally. My answer is 'Well I do not know.' Parents don't like you saying that to them, they want an answer. I can see that as being a big issue."
-- Aug .1, 2011, Elementary and Secondary Education Subcommittee.

Data For Action

"Lastly, tracking infections is key. These findings demonstrate the vital need to continue to monitor drug-resistant bacteria. If we want to stop resistant bacteria in their tracks, we have to know where to begin and how we are doing." – Dr. Arjun Srinivasan, MD, Division of Healthcare Quality Promotion, CDC, Medical Reports about Drug-Resistant Infections: May 29th, 2011
<http://blogs.cdc.gov/safehealthcare/?p=1450>

Public Reporting – 27 States plus the District of Columbia

Public Reporting

- “State initiatives on public reporting of healthcare-associated infections play an important role in the Federal effort to prevent healthcare-associated infections.”
- Don Wright, MD, MPH Deputy Assistant Secretary for Healthcare Quality, Office of the Assistant Secretary for Health, U.S. Department of Health and Human Services.

AHRQ Now Taking A Lead

- AHRQ awards \$34 million to expand fight against healthcare-associated infections -- Nov. 2, 2011
- NEED DATA to APPLY FOR GRANTS

Public Reporting

- Encourages Best Practices. Produces more of a behavior change in providers than patients.
 - Almost 1200 CDC practices to control HAI. The CDC has not effectively prioritized standards for HAI Control. There are over 500 strongly recommended practices.
- US GAO report 2008 <http://www.gao.gov/new.items/d08283.pdf>

Public Reporting incentivizes providers to use best practices of control.

MRSA Infections In Nursing Homes

- State of Maine 2011 Report – MRSA Positive on Admission to hospitals if a patient has spent at least one night in the last six months in a nursing homes.
- 20 of 36 Hospitals reported that 20% or more of Nursing Home residents were MRSA positive at the time of admission.

Healthcare Associated MRSA (Hospital Onset and Community Onset) comprise 86% of all infections.

MRSA -- 25% - 30% of individuals carry Staph aureus. Kentucky is in the region where almost 70% of the Staph cultures are MRSA positive. So far in 2011, only one MRSA Outbreak is known to be reported to the KY Health Dept. by Acute Care Facilities.

From The Center for Disease Dynamics, Economics & Policy
<http://www.cddep.org/ResistanceMap/bug-drug/MRSA>
<http://www.cddep.org/ResistanceMap/bug-drug/CA-MRSA>

Federal Reporting - NHSN

- Central Line Associated Bloodstream infections (CLABSI) in ICU Only
- Catheter Associated Urinary Tract infections – 2012 Collection, 2014 Payment Determination.
- Surgical Site Infections – 2012 Collection, 2014 Payment Determination.
- MRSA Bacteremia (Bloodstream Infection) – 2013 Collection, 2015 Payment Determination.
- Clostridium Difficile – 2013 Collection, 2015 Payment Determination.

Federal HAI Mandatory Reporting

- Central Line Associated Blood Stream Infections (CLABSI) -- ICU's only
 - MRSA -- Blood Stream Infections Only
- (A comment on the United Kingdom's experience of surveillance of MRSA Bacteremia as opposed to infections. Bacteremia was noted to be too uncommon in some institutions to monitor for improvement in MRSA control. <http://www.ncbi.nlm.nih.gov/pubmed/21978609>)
- C. Diff. Reporting does not include nursing homes, which have significant problems.
 - Does not include Critical Access Hospitals or Nursing Homes.
 - State Verification of Data and Reporting Metrics – All facilities on equal playing field.

Europe – Doing Better

- In Scandinavian Countries and the Netherlands, the proportion of MRSA in staph infections is less than 5%
- Northern Europe uses search and destroy tactics going into the community and testing contacts.
- In European countries MRSA decreased 13%
- <http://www.ncbi.nlm.nih.gov/pubmed/20929368>

Europe – Doing Better

- “Mandatory public reporting reduced healthcare infections in France.”
Methicillin-resistant Staphylococcus aureus infections decreased by 40%.
<http://www.mcknights.com/mandatory-public-reporting-reduces-healthcare-infections-infrance/article/166082/>

NHSN Reporting System

- Alignment & Uniformity in what data is submitted.
Align with CMS reporting requirements.
- One place to submit and the required information is the same.

Other States Switching to NHSN

- Pennsylvania has switched to NHSN.
- Ohio possibly switching from reporting to the State to NHSN, needs legislative action.

Public Reporting in Kentucky – St. Joseph and Norton Healthcare

Public Reporting

Patients who are at high risk or immunosuppressed are more likely to develop an infection.
BUT ONLY IF EXPOSED TO THE BACTERIA

Consumer Union (Publisher of Consumer Reports) – To receive the top rating for CLABSI prevention from Consumer Union a hospital will have to have at least 1000 catheter days and NO CLABSIs.

Tennessee CLABSI – Huge Reduction (greater than 50%) in Central Line Associated Bloodstream Infections.

Pennsylvania HAIs

First State to Publicly Report.

2009 Data -- Public Reporting Has Been Associated With:

- CLABSI dropped 24.4%.
- CAUTI dropped 13.2%.

Pennsylvania Dept. of Health. 2010 Report: Health Care Acquired Infections (HAI) in

Pennsylvania Hospitals:

[http://www.portal.state.pa.us/portal/server.pt/document/1204838/2010haireleasedreport_\(2\)_pdf](http://www.portal.state.pa.us/portal/server.pt/document/1204838/2010haireleasedreport_(2)_pdf)

HAI – Public Wants Reporting

Over 90% of Senator Harper Angel’s constituents want to have HAI reported to the Kentucky Health Department – Feb. 2011.

Comments on Transparency

‘Doug Leonard, President of the Indiana Hospital Association, said the industry needs to “embrace transparency. Sometimes we don’t like the results of that, but I think transparency is good for us and good for the public.” Even if the data are off by 50 percent or more, Leonard said, “it really doesn’t matter, because one injury or one error is wrong,” and hospitals should focus on preventing errors rather than disputing the numbers.’

-- Courier Journal June 12, 2011



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outbreaks in KY healthcare facilities 2010 & 2011

Humbaugh, Kraig (CHFS PH) <Kraig.Humbaugh@ky.gov>**Wed, Dec 14, 2011 at 6:30 PM**

To: Kevin Kavanagh <kavanagh.ent@gmail.com>

Cc: "Brawley, Robert (CHFS PH EPI)" <Robert.Brawley@ky.gov>, "Sands, Fontaine (CHFS PH)" <Fontaine.Sands@ky.gov>

Dr. Kavanagh,

In response to your open records request of December 13, 2011, the following information is provided:

In 2010, a total of 59 outbreaks in health care facilities were reported to the Kentucky Department for Public Health. Of these, 54 occurred in long term care facilities (LTC) and 5 in hospitals. In 26 of the LTC outbreaks, norovirus was the likely etiology. In two of the hospital outbreaks, norovirus was the likely etiology, and in one hospital outbreak, acinetobacter was the cause. Scabies was the etiology implicated in another hospital outbreak, and the cause of the final hospital outbreak was undetermined.

The 2011 data should be used with caution, since they are still preliminary. As of today's date, 46 outbreaks in health care facilities have been reported to the Kentucky Department for Public Health and recorded in the electronic system so far in 2011. Of these, 44 occurred in long term care facilities (LTC) and 2 in hospitals.

As in 2010, the majority of the LTC outbreaks for which a cause was found were determined to be associated with norovirus. Both recorded hospital outbreaks in 2011 involved MDROs (acinetobacter, 1, and MRSA, 1).

Again, all outbreaks for 2011 may not yet be recorded electronically--- and of course, there are still a few more weeks left in the year. Final numbers for the 2011 calendar year will not be available until sometime after the first of the year.

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Requested statement from Dr. Wright

Bradley, Ann (HHS/OASH) <Ann.Bradley@hhs.gov>
To: "kavanagh.ent@gmail.com" <kavanagh.ent@gmail.com>

Tue, Oct 12, 2010 at 1:05 PM

Dr. Kavanagh,

Dr. Wright offers the following statement for your presentation and potential other broadcast uses:

“State initiatives on public reporting of healthcare-associated infections play an important role in the Federal effort to prevent healthcare-associated infections. The U.S. Department of Health and Human Services has a number of supporting programs, such as the Centers for Disease Control and Prevention’s National Healthcare Safety Network and the Agency for Healthcare Research and Quality’s Patient Safety Organization Network of Patient Safety Databases, which facilitate collecting and reporting standardized data on healthcare-associated infections. These systems are in increasingly common use by healthcare providers and facilities and by State health agencies.”

Don Wright, MD, MPH

Deputy Assistant Secretary for Healthcare Quality

Office of the Assistant Secretary for Health

U.S. Department of health and Human Services

Please let me know any time that I can be of further assistance.

Ann

Ann M. Bradley

Public Affairs Specialist

Mounting Evidence Supports Universal Surveillance for MRSA in Preoperative Patients

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The thrust of the evidence-based review, "Universal screening for methicillin-resistant *Staphylococcus aureus* in surgical patients,"¹ in the *Journal of the American College of Surgeons* in December 2010 was to comment on the conflicting data regarding universal screening for methicillin-resistant *Staphylococcus aureus* (MRSA) in the surgical patient. An article from the *Journal of the American Medical Association (JAMA)* by Harbarth and colleagues² was used as the selected article to illustrate the conclusions. The commentary used this article as supporting evidence for not performing universal screening. However, in the analysis the following interpretation was made, "Also, only 43% of patients in the intervention group actually had changes made to their perioperative antibiotics because of time needed to get MRSA test results back."

In contradistinction, the Methods section of the *JAMA* article stated that of 386 identified MRSA carriers, 120 (31%) were not identified until after surgical intervention because of time delay and the urgency of surgery. Of the remaining 266 patients, 151 did not receive antibiotic prophylaxis against MRSA (57%).

What can possibly be concluded when 57% of carriers, who were identified before surgery, were not given MRSA prophylaxis? In addition, it was stated that "especially in abdominal surgery, surgeons were reluctant to add vancomycin to the standard prophylactic regimen."

There is no question that preoperative screening in emergency patients will not be as effective if the results are not known before surgery and aminoglycosides were not given preoperatively. This patient group needs to be separated out in any data analysis.

In addition, as the *JAMA* article pointed out, all of the 26 patients detected during outpatient visits had decolonization treatment and adequate prophylaxis and none developed a MRSA surgical infection. The vast majority of patients undergoing surgery do so on an elective or semielective basis. At our local hospitals, 80% of the patients fall into this category.

Clearly, the *JAMA* article should be used with caution if used as evidence against universal surveillance for MRSA in preoperative patients; the results and methodology are convoluted and can even be interpreted by some, to support surveillance.

Also at issue is the statement, that "Clearly, the intervention would not have been cost-effective because of the added cost of MRSA testing."¹ One must first define cost effectiveness. There have been several articles that have shown that universal screening is cost effective.^{3,4} The rapid polymerase chain reaction (PCR) test costs a facility under \$30 and a standard culture under \$10.⁵ However, when the cost to the patient is factored in, the loss of a leg with resultant disability or even death, the benefit far outweighs the facility cost of testing.

There is a very high rate of MRSA endemic in our communities. Recently, the carrier rates of all patients admitted to Veteran Administration Hospitals around the nation were reported to be between 5.4% and 28.1%, with a mean of 13.6%.⁶ Dr Marty Evans, one of the coauthors of the VA report, testified at a Kentucky senatorial hearing that at the Lexington, KY VA Hospital, admitted patients have a 0.8% chance of developing a deep seated infection if they are surveillance culture negative, but a 17% chance of developing an infection if they are surveillance culture positive.⁷ It has also been reported by Shukla and colleagues⁸ that MRSA carriers have a higher rate of surgical infections.

As mentioned in the commentary, at least 3 articles have reported success in lowering MRSA infections in surgical patients. The last major study involved cardiac surgery and was published in January 2011; it reported near-complete and successful elimination of MRSA infections.⁹

The commentary also calls for better screening, more effective decolonization, and better antibiotics for prophylaxis. However, without universal screening of surgical patients, are we to give everyone vancomycin, with the immediate risks to the patient and the long-term risks for fostering further antibiotic resistance? Even routine treatment of a patient's naris with mupirocin (Bactroban, GlaxoSmithKline) has been reported to cause bacterial resistance.¹⁰ One of the keys in Norway's success in addressing the MRSA epidemic is not only in surveillance in the community but also in decreasing antibiotic usage.¹¹

Certainly patients undergoing thyroid, parotid, breast, sinus, and ear surgery should not routinely be given vancomycin unless there is another risk factor for infection. A MRSA carrier state would be an example of such a risk factor.

The American College of Surgeons should consider supporting the universal screening for MRSA in surgical patients to become a Tier I CDC recommendation.

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