# HEALTHCARE ACQUIRED INFECTIONS

A Public Safety & Healthcare Issue
One of the Top 10 Causes of Death in the United States.

http://www.cdph.ca.gov/programs/hai/pages/default.aspx
http://www.oregon.gov/OHA/OHPR/docs/HCAIAC/Materials/Binder_Materials/HCAIAC_Charter.pdf?ga=t

Kevin T Kavanagh, MD, MS, FACS
Health Watch USA
June 21st, 2011

This presentation is the express opinion of Dr Kevin T. Kavanagh, MD, MS, FACS

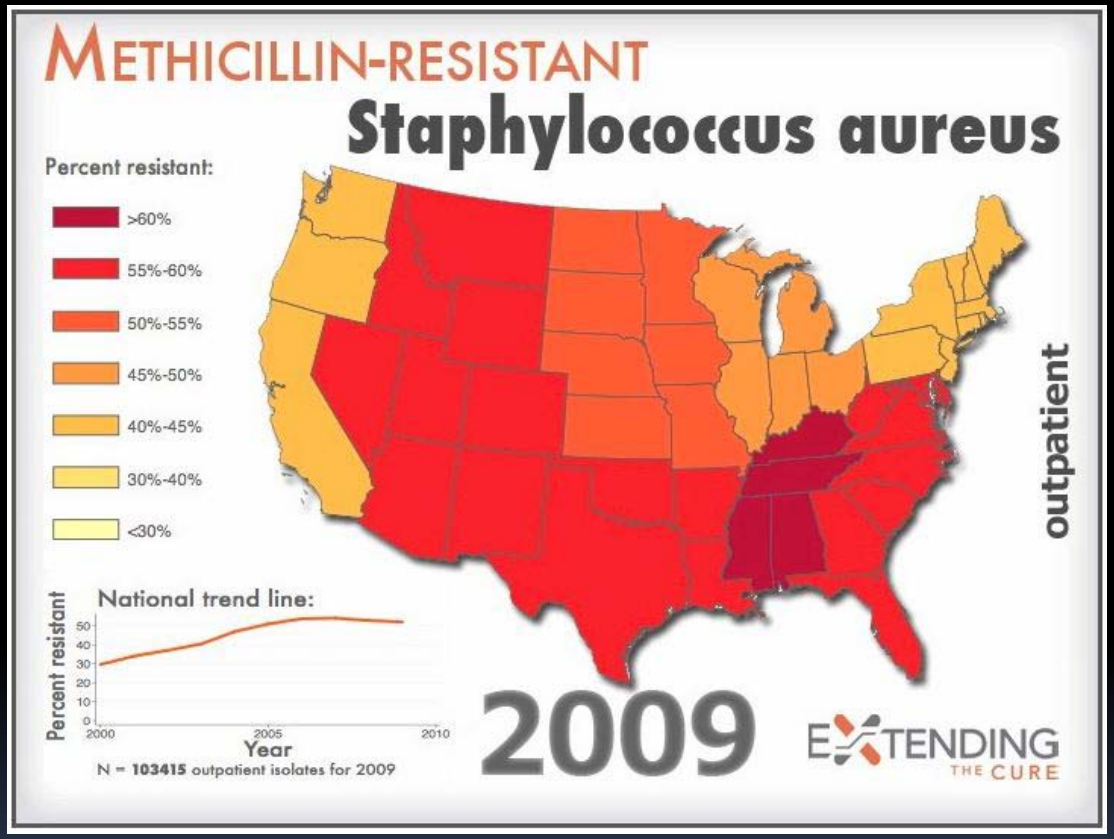
# Size of the Problem

- Hospital Acquired Infections affect approximately one in twenty patients.
- Cost:  30 Billion dollars
- Nearly 100,000 deaths in the United States each year.

- In Kentucky:  23,000 infections with almost 1,400 deaths at a cost of approximately $400,000,000.

# Size of the Problem

- MRSA – 5% of patients in a Boston ER are Carriers (Dr. Gupta, VA Hospital, May 2011).
- In Kentucky over 60% of Staph Outpatient Isolates are MRSA.




http://www.healthleadersmedia.com/content/QUA-261460/MRSA-Infects-5-of-ED-Patients

http://www.cddep.org/resistancemap/methicillin-saureus

# Size of the Problem

- C. Diff. is also prevalent. It has been reported that Kentucky has the 6th highest rate of C. Diff.  infections in the nation at 21.8 infections per 1000 patients.

- http://www.ama-assn.org/amednews/2009/images/gprca0601a.pdf

# Thomas R. Frieden, MD, MPH Director of the CDC

- "An important role of public health agencies is to define the unacceptable. This concept has particular relevance for healthcare-associated infections. Evidence indicates that, with focused efforts, these once formidable infections can be greatly reduced in number, leading to a new normal for healthcare-associated infections as rare, unacceptable events."

- Frieden TR, Maximizing Infection Prevention in the Next Decade: Defining the Unacceptable. Infect Control Hosp Epidemiol. 2010 Oct;31:S1–S3.
- http://www.journals.uchicago.edu/doi/full/10.1086/656002

# Four Pillars of Control

- **The Four Pillars of Control - White Paper Released by the CDC, IDSA, APIC, SHEA, CSTE and ASTHO.**
  - Data for Action
  - Align Incentives
  - Adherence to Evidence Based Prevention Practices
  - Innovation Research


- Cardo D, Dennehy PH, Halverson P, et al. Moving toward elimination of healthcare-associated infections: A call to action. Infect Control Hosp Epidemiol. 2010 Oct;31:S42 to S44. http://www.apic.org/Content/NavigationMenu/GovernmentAdvocacy/RegulatoryIssues/CDC/AJIC_Elimin.pdf

# Data: Importance of Data

- "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 Srinvasan, MD, Division of Healthcare Quality Promotion, CDC

- Medial Reports about Drug-Resistant Infections: May 29th, 2011 http:/blogs.cdc.gov/safehealthcare//?p=1450

# Data: Why Data is Needed

- To design interventions you need to know what bugs to target and a baseline to compare the results to.
- To write grants.
- To know which bugs to target with antibiotic development.
- To motivate the community to change behavior.
  -- Hand washing.
  -- Cleaning public restrooms and facilities.
- For example: MRSA and C. Diff are handled differently.

# Data: Kentucky is Not Adequately Reporting

- KY CDC Grant:
  - Only outbreaks are reported
  - No definition of an outbreak.
  - Outbreaks could be from community or hospital
  - Only four outbreaks reported from hospitals over a year's time.

# Data: The "Burden" of Reporting

- However, The Hospital Industry is profitable.
- It is the strongest sector in our economy.
- The so called "Burden" is small compared to the community benefit.

**Lexington hospitals building to be the best – 2009**
**(Lexington Herald Leader, Dec. 13, 2009)**

**Norton Healthcare profits withstand recession …**
**(Courier Journal, Jun. 26, 2010)**
**Note: Norton Very Profitable and 100% Transparent**

- **Summary of hospital finances available at www.ahd.com**

# Incentives: Importance of Public Reporting

- "CDC does believe that increased transparency, public reporting of healthcare-associated infections is an important part of a comprehensive effort to prevent healthcare-associated infections and eliminate these infections ..." -- Dr. Srinivasan, Director of CDC's HAI prevention program.

- Media Telebriefing on State Healthcare-Associated Infection Data, May 27, 2010 http://www.cdc.gov/media/transcripts/2010/t100527.htm

# Incentives: Office of Healthcare Quality US Dept HHS

- "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.

# Incentives: CMS Data – Publically Released

- University of Kentucky
- Example of How Public Reporting Can Work

| University of Kentucky | | | National Ave |
|---|---|---|---|
| **Hospital Acquired Condition** | **Number** | **per/1000** | **per/1000** |
| PRESSURE ULCER STAGES III AND IV | 4 | 0.29 | 0.135 |
| FALLS AND TRAUMA | 17 | 1.233 | 0.564 |
| VASCULAR CATHETER-ASSOCIATED INFECTION | 11 | 0.798 | 0.367 |

# Incentives: Public Reporting

- Dr. Dan Varga: "You manage what is measured and you really manage what you measure and publically report."
- Comparable Data – Use the CDC's NHSN Network.
  -- Risk Adjusted for facility comparison and Value Purchasing.
  -- Non-risk adjusted to track facilities over time and motivate community involvement. (Comparable to School Data).
- **NO DUPLICATION WITH FEDERAL EFFORTS !!!**

# Evidence Based Prevention Practices:
## These Should Be Close to Zero

- Central Line Infections -CLBSI – 82% Reduction. (1)
- Ventilator Associated Pneumonia -VAP – 70% Reduction.(2)
- MRSA – Cardiac Surgery, Almost Eliminated.(3)
- Patient Falls – Should be Zero.
- Pressure Ulcers – Stage III and IV should be almost zero.


- (1) Pronovost P, Needham D, Berenholtz S, et al., An intervention to decrease catheter-related bloodstream infections in the ICU. N Engl J Med. 2006 Dec. 28;355(26):2725-32. http://www.ncbi.nlm.nih.gov/pubmed/17192537
- (2) AHRQ. Rates of Pneumonia Dramatically Reduced in Patients on Ventilators in Michigan Intensive Care Units http://www.ahrq.gov/news/press/pr2011/cuspvappr.htm
- (3) Walsh EE, Greene L, Kirshner R. Sustained reduction in methicillin-resistant Staphylococcus aureus wound infections after cardiothoracic surgery. Arch Intern Med. 2011 Jan 10;171(1):68-73. Epub 2010 Sep 13. http://www.ncbi.nlm.nih.gov/pubmed/20837818

# Evidence Based Prevention Practices:
## Veterans Administration - MRSA

- All Facilities should give the public the same protection from MRSA as the VA Hospitals.
- The rate of MRSA infections in the VA System was lowered 76% in the ICU setting to 0.39 infections per 1000 bed care days and 28% in non-ICU settings to 0.33 infections per 1000 bed care days.

The VA national MRSA results involved 153 facilities and over 1 million patients (Dr. Martin Evans, Hospital Infection Control & Prevention. Vol7(48) Dec 2, 2010.)

# Evidence Based Prevention Practices:
## Why We Can't Set Standards

- Two Underpowered Studies –
  In both, the Intervention Group had intervention less than half of the time.
  -- Swiss/Geneva Study JAMA 2008
  -- STAR*ICU Study NEJM 2011
- As any farmer will tell you, if you keep the insecticide in the barn and do not place it on the crops it will not kill the bugs.
- "Public Citizen" has referred the STAR study to the US OIG for review.

# Evidence Based Prevention Practices:
## Kentucky – What is an Infection ??

- But healthcare systems treat and bill patients for infections.

# Evidence Based Prevention Practices
## CUSP (Comprehensive Unit Based Safety Program)

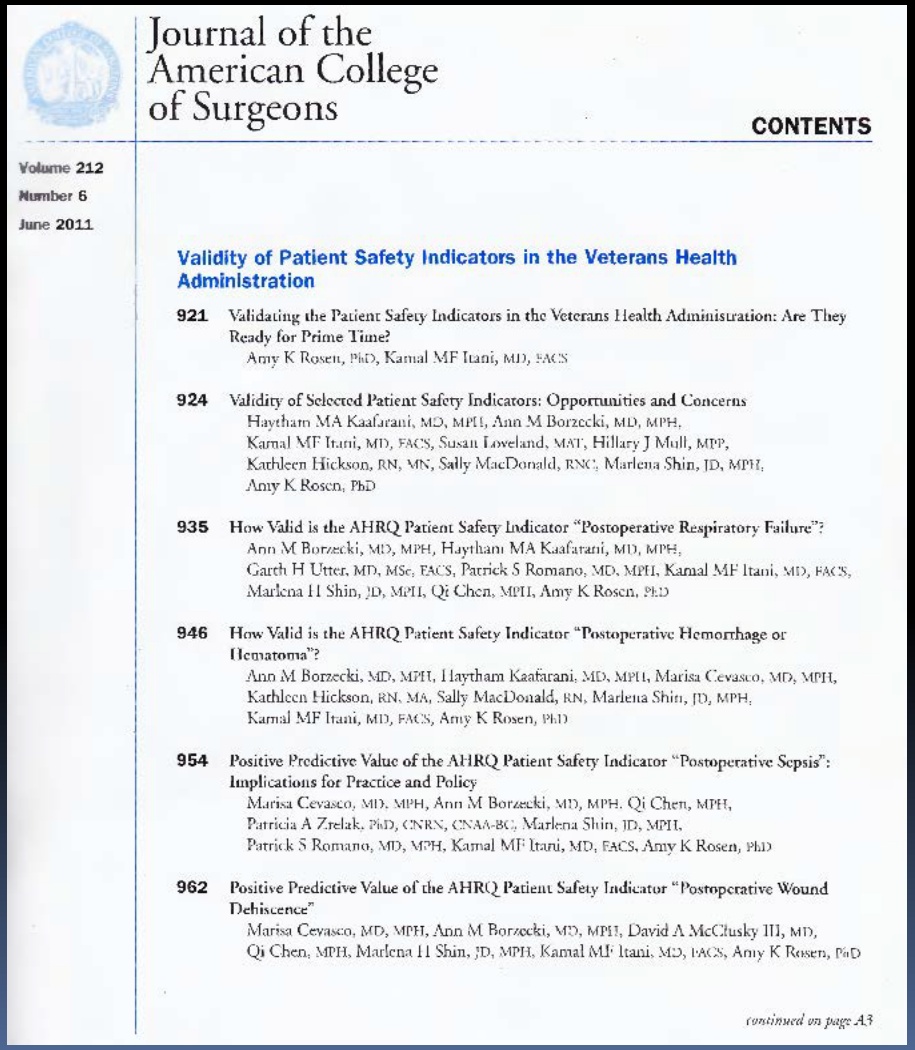
**National effort to prevent central line-associated bloodstream infections (CLABSIs) and catheter-associated urinary tract infections (CAUTIs).**

- In Aug. 2010, WKYT reported that 39 Kentucky Hospitals were participating in CUSP.

  http://www.wkyt.com/news/headlines/101922173.html
- In April 2011, AHRQ Reported that 33 Kentucky Hospitals were participating in CUSP.

  http://www.ahrq.gov/qual/onthecusprpt/onthecusp.pdf

# Evidence Based Prevention Practices
## VA System – Adverse Outcome Tracking



Journal of the American College of Surgeons

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**Validity of Patient Safety Indicators in the Veterans Health Administration**



*continued on page A3*

**Veteran Administration Hospitals are leaders in preventing adverse outcomes.**

The Journal of the American College of Surgeons devoted a large portion of its issue in June of 2011 on the VA System.

One area of improvement is to change the VA's coding to denote if the adverse condition was present on admission.

# What is Needed

# Hospital Boards & The Community Need to Be Involved

- Hospital Boards are the governing body of the Hospital.
- Hire and fire the CEO and Hospital staff
- Need to be engaged.
- In Non-Profits, over 50% of the Board cannot have a conflict of interest with the institution.
- Primary fiduciary responsibility (loyalty) of Non-Profits is to charitable purposes.

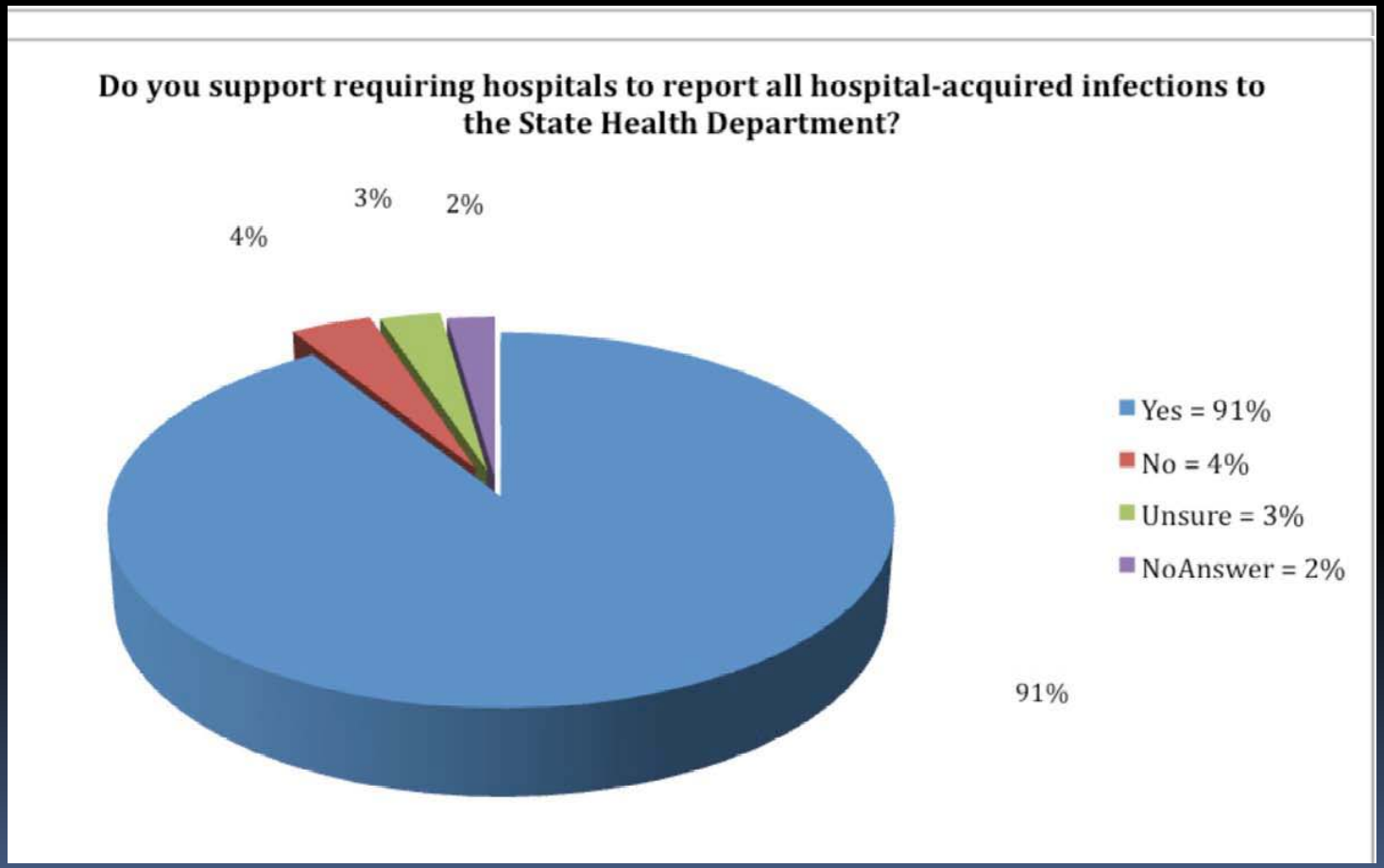
# Transparency

- To address problems in complex systems.
- Need Complete transparency including with the community.
- '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

# HAI – Public Wants Reporting

## Poll: Senator Harper-Angel, Feb. 2010



# Action

- At the very, least KRS 211.180 gives the Governor broad authority to control communicable diseases.
- Regulations could be enacted to require reporting of all Healthcare Acquired Infections at Kentucky's facilities through the CDC's National Healthcare Safety Network.

# Action

- The University Hospitals, owned by the State, should have complete transparency with the public.

# Steps for Introduction of New Ideas

**"All truth passes through three stages.**

- **First, it is ridiculed.**
- **Second, it is violently opposed.**
- **Third, it is accepted as being self-evident.“**

**Arthur Schopenhauer, 19th century German philosopher**

# Conclusion

- Kentuckians have the right to know what the MRSA rates are in their facilities.
- The benefit to society far outweighs the so-called “Burden” to the healthcare industry.
- Lift the Veil of Secrecy regarding hospital and healthcare acquired conditions.