

# 3<sup>rd</sup> Annual Working Together for Quality and Service Conference

Bill Borwegen, MPH, Director  
Occupational Health and Safety  
Service Employees International Union  
(202) 730-7385  
[Bill.Borwegen@seiu.org](mailto:Bill.Borwegen@seiu.org)

# SEIU: Who We Are

- - 2 M members, including 1 M HCWs
- - largest union of health care workers
- - largest union of building service workers
- - second largest union of public employees
- - fastest growing union in North America

# Strive to Improve Members' H&S Working Conditions

- - Research hazards members face
- - Develop educational materials
- - Provide technical assistance
- - Conduct workshops
- - Influence actions of federal H&S agencies
- - Promote passage of health and safety laws and regulations at the state and federal level

# Health Care Worker Population:

- 12.5 million workers and growing
- Committed to promoting health
- Providing our patients with quality care
- Protecting our own health

# Hospital Acquired Infections (HAI)

RESEARCH ARTICLES

## Estimating Health Care-Associated Infections and Deaths in U.S. Hospitals, 2002

R. MONIKA KLEVENS, DDS, MPH<sup>a</sup>  
JONATHAN R. EDWARDS, MS<sup>b</sup>  
CHESLEY L. RICHARDS, JR., MD,  
MPH<sup>b,c,d</sup>  
TERESA C. HORAN, MPH<sup>e</sup>  
ROBERT P. GAYNES, MD<sup>g</sup>  
DANIEL A. POLLOCK, MD<sup>a</sup>  
DENISE M. CARDO, MD<sup>a</sup>

### SYNOPSIS

**Objective.** The purpose of this study was to provide a national estimate of the number of healthcare-associated infections (HAI) and deaths in United States hospitals.

**Methods.** No single source of nationally representative data on HAIs is currently available. The authors used a multi-step approach and three data

- Resulting annually in:
  - ◆ 1.7 million infections
  - ◆ 99,000 patient deaths

# For Comparison

Annual deaths due to:

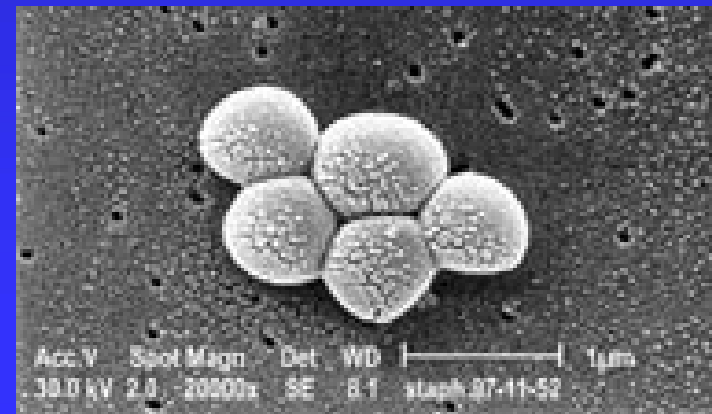
- 37,000 from motor vehicle crashes
- 16,000 murders/homicides
- 99,000 from hospital acquired infections!!

# Healthcare Liability Cost of HAI

- Hospital acquired conditions (including HAI) account for more than 12% of healthcare legal liability
- One in six claims
- Oct 1, 2008 – Medicare and Medicaid deem HAI as “never events” and stopped payments.

# Healthcare-Associated Methicillin Resistant *Staphylococcus aureus* (HA-MRSA)

- MRSA causes “staph” infections resistant to treatment with usual antibiotics.
- MRSA in healthcare settings commonly causes serious and potentially life threatening infections, such as bloodstream infections, surgical site infections, or pneumonia.

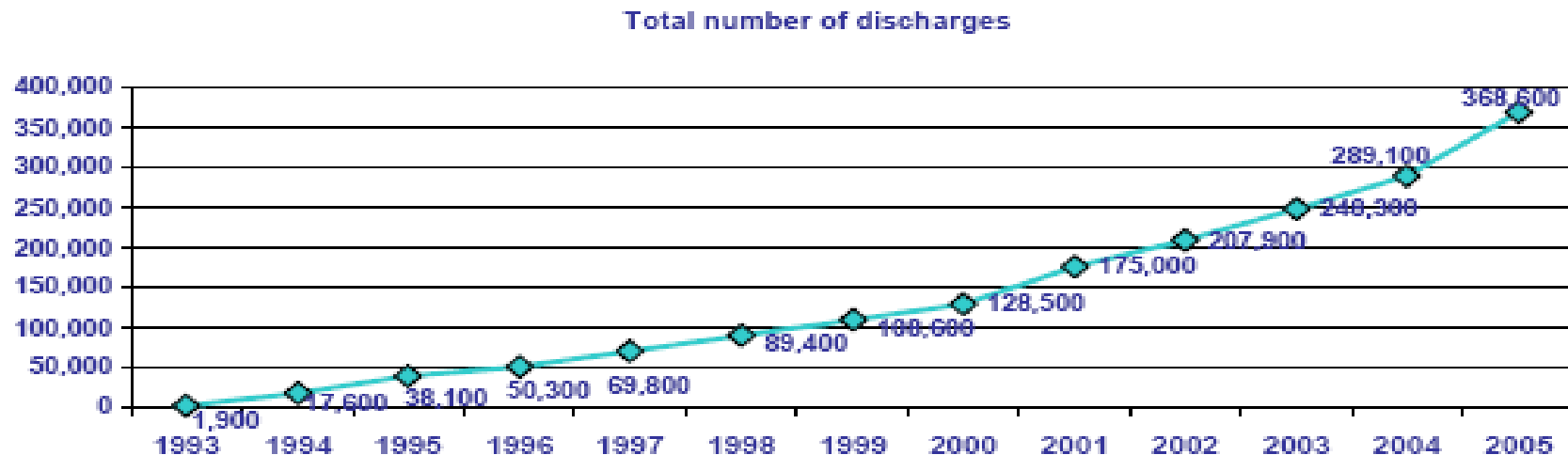




# MRSA Growing Problem



**Figure 1. Hospital stays with methicillin-resistant Staphylococcus aureus (MRSA) infections, 1993–2005**



Source: AHRQ, Center for Delivery, Organization, and Markets, Healthcare Cost and Utilization Project, Nationwide Inpatient Sample, 1993-2005

\*Elixhauser, A. (AHRQ) and Steiner, C. (AHRQ). Infections with Methicillin-Resistant Staphylococcus Aureus (MRSA) in U.S. Hospitals, 1993–2005. HCUP Statistical Brief #35. July 2007. Agency for Healthcare Research and Quality, Rockville, MD. <http://www.hcup-us.ahrq.gov/reports/statbriefs/sb35.pdf>

# Modes of Transmission of Hospital Acquired Infections (HAIs)

- Person-person via hands of health care providers
- Patient and personal equipment and clothing
- Environmental contamination

Source: Institute for Healthcare Improvement

# Key Interventions

1. Hand hygiene
2. Decontamination of the environment and equipment
3. Contact precautions for infected and colonized patients

# Hand Hygiene

- Single most important intervention
  - ◆ *before and after* patient contact

Compliance rates of 40-50% *no longer acceptable*

- Alcohol hand rubs make it easier
  - ◆ Rapidly kill bacteria (except *Clostridium difficile* spores)
  - ◆ Not a substitute for soap and water when hands are visibly soiled

# Hand Hygiene



## Recommended Hand Hygiene Technique



- Handrubs
  - Apply to palm of one hand, rub hands together covering all surfaces until dry
  - Volume: based on manufacturer
- Handwashing
  - Wet hands with water, apply soap, rub hands together for at least 15 seconds
  - Rinse and dry with disposable towel
  - Use towel to turn off faucet

Guideline for Hand Hygiene in Health-care Settings. *MMWR* 2002; vol. 51, no. RR-16.

# Hand Hygiene



## Education/Motivation Programs



- Monitor healthcare workers (HCWs) adherence with recommended hand hygiene practices and give feedback
- Implement a multidisciplinary program to improve adherence to recommended practices
- Encourage patients and their families to remind HCWs to practice hand hygiene

Guideline for Hand Hygiene in Health-care Settings. *MMWR* 2002; vol. 51, no. RR-16.

# Decontamination of Environment and Equipment

- Use dedicated equipment for colonized/infected patients.
- Clean patient care and personal equipment when leaving the bedside.
- Importance of environmental services personnel (enough well trained staff)
- Clean and disinfect the environment carefully.
  - ◆ Focus on “high-touch” areas.

# Cleaners Don't Disinfect, and Disinfectants Don't Clean

- In general, cleaners don't disinfect, and disinfectants don't clean.
- Disinfectant suitable for the type of surface being treated (e.g., vinyl, cloth, plastic, or wood)
- An EPA-registered disinfectant proven effective against MRSA should be used to disinfect hard, non-porous surfaces (EPA's Registered Products Effective Against Methicillin Resistant *Staphylococcus aureus* (MRSA) and Vancomycin Resistant *Enterococcus faecalis* or *faecium* (VRE) June 30, 2008



# Disinfecting: Contact Time

- Time needed for the disinfectant to inactivate or kill germs to the extent as indicated by the manufacturer.
- Disinfectant contact times can be from 45 seconds to 10 minutes., meaning surfaces must be kept wet with disinfectant for the entire contact time to be most effective.
- For example, if a disinfectant label says that the product will inactivate 99.99% of germs, and the contact time of 1 minute is in the instructions, this means that this disinfectant will inactivate or kill 99.99% of germs in 1 minute.
- Environmental Services staff must be properly trained in this concept to ensure effective application, especially since long contact time often means re-applying disinfectant to the surface once or more.

# Washington Post, October 2008:

- Improper use of chemical disinfectants might make bacteria more resistant over time <sup>1</sup>

<sup>1</sup> Aurélie A. Huet, Jose L. Raygada, Kabir Mendiratta, Susan M. Seo and Glenn W. Kaatz “Multidrug efflux pump overexpression in *Staphylococcus aureus* after single and multiple *in vitro* exposures to biocides and dyes” *Microbiology* 154 (2008), 3144-3153;

# Seasonal Influenza Vaccination

- 36,000 deaths a year
- 200,000 hospitalizations
- 40% of healthcare workers get vaccine
- Free shots- mostly in hospitals, less so in nursing homes and homecare

## CDC Recommendations:

“October each year, health-care facilities should:

- “offer influenza vaccinations to all workers, including night and weekend staff.”
- “emphasis ... placed on providing vaccinations to persons who care for members of groups at high risk.”
- “educate health-care workers regarding the benefits of vaccination and the potential health consequences of influenza illness for their patients, themselves, and their family members.”
- Provide “convenient access to influenza vaccine at the work site, free of charge”

# Barriers to Vaccination

- More myths about the seasonal flu vaccine than with any other vaccine: causes flu, doesn't work, flu is not that serious, etc., etc.
- Lack of, or inferior educational efforts- especially to reach low literacy and immigrant HCW populations
- Lack of easy availability of free shots offered on-the-clock - especially an issue for HCWs who work outside hospitals

# Elements of a successful flu vaccination education program

- Annually
- Classroom based
- Knowledgeable Speaker
- Ability to ask questions
- Adequate staffing for attendance
- Supervisors encourage participation

# Influenza Vaccination Interventions Increase Rates

- Healthcare Workers - - California and Minnesota
  - ◆ Comprehensive Education
  - ◆ Mobile Carts with Free shots
  - ◆ Incentives: Prizes, Free Dinner
  - ◆ Rate increase from 42% to 76%

CDC. Interventions to increase influenza vaccination of healthcare workers-  
California and Minnesota. MMWR. 2005;54(08):196-199

# SEIU has a long track record of encouraging vaccination

- Early 1980's: 17,000 HCWs a year contracting Hepatitis B; 300 dying (source: CDC)
- Hepatitis B vaccine was not being provided free of charge in many instances
- Education lacking
- SEIU petitioned OSHA for the BBD standard in 1986; standard released in 1991



# Hepatitis B Vaccine Saves Lives

## OSHA Success Story:

Hepatitis B cases have plummeted from 17,000 cases and 250 deaths among HCWs in 1983 to 400 cases and an undetectable number of deaths in 1995 (CDC 1997)

Today, Hep B vaccine rates are double that for the Flu vaccine – 67%-75%

# Seasonal Influenza Vaccine

- SEIU encourages all members to get the flu vaccine
- SEIU encourages employers to make the vaccine available free of charge on-the-clock
- SEIU encourages comprehensive employer provided flu educational programs annually that are modeled after what is required under the OSHA BBD standard for Hepatitis B