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Policy Brief:

Public Disclosure Will Encourage Hospitals to Improve Infection Practices

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If consumers can choose a hospital based on good information about the quality of care, including hospital infection rates, hospitals will quickly implement better practices. Studies show significant improvement in states with public data on mortality rates and other indicators of quality. A growing number of states are adopting laws that require hospitals to publicly report patient infections. But consumers in most states have no way of knowing which hospital has the best track record to help them make informed health care choices.

Hospital infection is a leading cause of death. About 90,000 people each year die from infections they contract while in the hospital for other health problems— infections that add nearly \$5 billion to our nation’s health care bill.¹ More people die of hospital acquired infections than from auto accidents and homicides combined.² An additional 1.9 million or so get an infection that does not cause death, but depending on the type of infection, these patients spend from one to 30 extra days in the hospital getting treated.³

Increasingly, the infections that spread in hospital settings are resistant to common antibiotics,⁴ and these resistant strains have begun to spread from hospitals into the community. A 2002 Chicago Tribune investigation found that at least 200 people in Illinois died of drug-resistant infections that they contracted at home or at work, infections rarely found outside of hospitals five years ago.⁵ In 1997 doctors found the first methicillin resistant staph infection (MRSA), common in hospitals, in a patient who had not had any contact with a hospital, and the CDC has since confirmed other cases. The CDC recently reported the spread of MRSA among people in competitive sports, prisoners and others.⁶

Preventing Hospital Infection

Hospitals treat a lot of very sick people—people who are both more likely to contract an infection due to their already weakened state, and people who are more likely to carry an infection into the hospital with them. On top of that, invasive procedures like surgery bypass the body’s defenses against infection, creating natural pathways for disease. Even so, most studies show that hospital infections can be reduced by implementation of infection control practices—especially hand washing. And infections can be reduced significantly when hospitals commit to well organized infection control programs.⁷

By definition, any infection that you don’t bring with you into the hospital is a hospital-acquired infection. Hospitals and infection control experts call these “nosocomial” infections. These infections are most common among patients using invasive devices like intravenous tubes (IVs), catheters, and ventilators—and among surgical patients, elderly patients, infants, and ICU patients (who generally are more likely to be on IVs, catheters and ventilators).⁸ Depending on the specific type of infection or infection control practice under study, researchers find that improved infection control practices can reduce the spread of hospital infections by anywhere from 10 percent to 70 percent.⁹ Studies of comprehensive hospital programs designed to to reduce all types of infections find reductions of over 50 percent.¹⁰



According to the CDC, hospitals can reduce the number of surgical site infections by ensuring that patients receive antibiotics prior to surgery (unless contraindicated), improving hand washing techniques and operating room practices, and monitoring patients after discharge.

In 2002, the CDC issued new hand-washing guidelines for health care workers—advising that hospitals use alcohol based hand products rather than plain soap and water because busy employees found them easier to use.¹¹ Although studies show that improved hand washing in hospitals reduces infection rates significantly, hand washing compliance rates are generally less than 50 percent.¹²

For the areas of the hospital most prone to the spread of infection, a number of other infection control practices have been proven effective. A study of neonatal ICU infection found that a campaign of aggressive monitoring and education dropped the infection rate from 42 percent to 12 percent in five years.¹³ Studies indicate that the use of catheters coated with antimicrobial or antiseptic agents can reduce infections, although they cost slightly more.¹⁴ Surgical site infections, the second most common hospital-acquired infection,¹⁵ can be reduced through careful application of antibiotics before surgery, changes in preoperative anti-infection procedures, attention to operating room ventilation and procedures, and post-surgical surveillance.¹⁶

Keeping Secrets

Hospitals and the CDC identified the growing problem of preventable hospital-acquired infection more than three decades ago. Today many hospitals track their own infection rates, especially in units like the ICU or neonatal ward where infections are common or patients are particularly susceptible. But most do not currently report infection rates to any regulatory agency or accreditation body. They cannot compare their performance to other area hospitals, and their patients cannot know if they are getting the best available care. In 2004, the nation's leading hospital accreditation organization (the Joint Commission on Accreditation of Healthcare

Organizations) chastised hospitals for under-reporting deaths due to hospital-acquired infection. Since JCAHO implemented reporting of “sentinel events” (death or serious injury) in 1996, only 10 infection-related reports had been reviewed.

“Numerous high profile media reports of incidences of patient death resulting from hospital-acquired infection indicate that such cases are seriously under-reported to JCAHO,” the organization wrote in January, 2003.¹⁷ Unfortunately, reports to JCAHO are entirely voluntary. The agency sent a special advisory to hospitals “to clarify that nosocomial infections resulting in death or serious injury should be voluntarily reported.”¹⁸ Nine months later, JCAHO had seen no increase in reporting of sentinel events related to hospital infection.¹⁹ Where hospitals do report, the information is typically held in secret. The JCAHO information is only reported to the public in aggregate form. The CDC launched a confidential, voluntary reporting program in 1970. But by 2000, only 315 of the nation's 4,900 hospitals had joined.²⁰ The program gives hospitals a standardized way to measure infection rates and compare their own infection rates with the average of all the hospitals in the program. Participating hospitals together reduced their infection rates significantly during the 1990s—proving that hospital infections can be prevented.²¹ But patients and employers cannot distinguish the best from the worst rates, and for the thousands of non-participating hospitals, virtually no information exists about infections or infection control practices.

Mandatory Public Reporting Works

Several states have instituted data systems that report hospital-specific quality of care information to the public—and in those states, hospitals have worked hard to improve their outcomes on the publicly reported indicators.²² Most of these quality reports focus on mortality rates for selected surgical procedures like coronary artery bypass grafts (CABG). The mortality rates are adjusted to account for the differences among patients, and consumers can see whether patients die at a higher rate at one hospital compared to another. News organizations have not been shy about reporting the differences either.

New York was among the first states to compare hospital mortality for CABG. When the early reports were issued, hospitals with substantially higher mortality rates responded by examining their surgical systems and identifying areas of improvement. Winthrop University Hospital on Long Island fared poorly among heart programs, so it hired a renowned cardiologist to overhaul its program, hired additional staff, and created a new database system to monitor quality of care. Within two years, the cardiac program had one of the state's lowest mortality rates.²³

According to Dr. Ed Hannan of Albany's School of Public Health, hospitals reviewed the timing of surgery, monitored post-operative and ICU care, and created systems to prevent post-operative bleeding. While mortality for this surgery declined by 13% among all patients in the U.S., mortality

declined in New York hospitals by 28%-and the declines are partly related to public dissemination of outcomes data.²⁴ Recent data published in Health Affairs “provide strong evidence that making performance information public stimulates quality improvement in the areas where performance is reported to be low.” Researchers specifically site the hospitals’ concern for their public image as a key motivator for improvement.²⁵

States Require Public Reporting

Over the past three years, sixteen states around the country have adopted laws requiring some level of public reporting of patient infection rates. So far, Florida, Missouri, and Pennsylvania have produced public reports on their state hospital’s infection rates.

Pennsylvania has produced the most extensive reports to date based on data submitted by the state’s hospitals. In a November 2006 report, the state revealed that hospitals disclosed 19,154 patient infections during 2005 and detailed infection rates for each of the state’s 168 hospitals. The report found that the mortality rate for patients with a hospital acquired infection was 12.9 percent compared to 2.3 percent for patients without infections. Patients with infections stayed in the hospital 20.6 days compared to 4.5 days for patients without infections. Insurers paid an average of \$53,915 for hospitalization of patients with infections, compared to \$8,311 for patients without infections.

Hospital Infection reporting requirements also have been adopted in California, Colorado, Connecticut, Illinois, Maryland, New York, New Hampshire, Ohio, Rhode Island, South Carolina, Tennessee, Virginia, and Vermont. California will only report on the rate that hospitals perform certain infection prevention practices.

To learn more about state action on hospital infections and to download Consumers Union’s model law, see: www.StopHospitalInfections.org.

Conclusion

Consumers Union supports state laws that require public reporting of hospital-acquired infection rates. As antibiotic resistant infections begin to move from hospitals into the community, it is imperative that hospitals reduce their infection rates by all available means. And the best way to make that happen is to give consumers the quality of care tools to use to pick the best hospital.

For tips on shopping for the best hospital, avoiding medical errors,

and getting the most out of your hospital stay, you can go to our web site and review articles from Consumer Reports on Health, the health and medicine special publication of Consumer Reports Magazine at www.consumerreports.org.

Footnotes

- 1 U.S. Centers for Disease Control and Prevention, Office of Communication, “Hospital Infections Cost U.S. Billions of Dollars Annually,” 3/6/00, “CDC Releases New Hand-hygiene Guidelines,” 10/25/02.
- 2 National Highway Traffic Safety Administration, National Center for Statistics and Analysis, “2002 Annual Assessment of Motor Vehicle Crashes,” internet publication, http://www-nrd.nhtsa.dot.gov/2002annual_assessment/long_term_trends.htm. U.S. Centers for Disease Control and Prevention, National Vital Statistics Reports, Vol. 51, No. 5, Deaths, Preliminary Data for 2001.
- 3 U.S. Centers for Disease Control, Office of Communication, “Hospital Infections Cost U.S. Billions of Dollars Annually,” 3/6/00, “CDC Releases New Hand-hygiene Guidelines,” 10/25/02.
- 4 Fridkin, Scott K. et al, Antimicrobial Resistance in Intensive Care Units, Clinics in Chest Medicine, Volume 20, No. 2, June 1999, p. 305-308. Study based on hospitals enrolled in CDC’s voluntary surveillance system, NNIS.
- 5 Berens, Michael, “Unhealthy Hospitals,” Chicago Tribune, 7/23/02.
- 6 Methicillin-Resistant Staphylococcus Aureus Infections Among Competitive Sports Participants, Colorado, Indiana, Pennsylvania, and Los Angeles County, 2000-2003,” MMWR Weekly, August 22, 2003. See also, CDC’s MRSA Fact Sheet, www.cdc.gov/ncidod/hip/AREMIST/mrsafaq.htm.
- 7 Harbarth, S. et al, “The Preventable Portion of Nosocomial Infections: an overview of published reports,” Journal of Hospital Infection (2003) 54, 258-266.
- 8 Richards, Michael et al, Epidemiology, Prevalence, and Sites of Infection in Intensive Care Units, Semin Respir Crit Care Med 2003, 24 (1):3-22. Infectious Diseases in an Age of Change, National Academy of Sciences, 1995, pp 113-134.
- 9 Harbarth, p. 260.
- 10 “CDC’s Seven Healthcare Safety Challenges,” <http://www.cdc.gov/ncidod/hip/challenges.htm>. The challenges specifically include reducing by 50% drug resistant bacterial infections in hospital settings.
- 11 U.S. Centers for Disease Control, Office of Communication, “CDC Releases new hand-hygiene guidelines,” 10/25/02.
- 12 Harbarth, p. 261, citing Pittit et al (2000). Introduction of alcohol based hand rubs along with active MRSA control program reduced hospital infection 41%. The National Quality Forum, Safe Practices for Better Healthcare: A consensus report,” p. 50.
- 13 Harbarth, p. 261.
- 14 U.S. Centers for Disease Control, “Guidelines for the Prevention of Intravascular Catheter-Related Infections,” MMWR, August 9, 2002, p.7.



15 Perencevich, Eli N. et al, "Health and Economic Impact of Surgical Site Infections Diagnosed After Hospital Discharge," *Emerging Infectious Diseases*, February 2003.

16 U.S. Centers for Disease Control and Prevention, National Center for Infectious Disease, Hospital Infections Program, "Guideline for Prevention of Surgical Site Infection, 1999." *The National Quality Forum, Safe Practices for Better Healthcare: A consensus report*, p. 45.

17 Joint Commission on Accreditation of Healthcare Organizations, "Sentinel Event Alert," Issue 28, January 22, 2003.

18 Joint Commission on Accreditation of Healthcare Organizations, "JCAHO Taps Expert Panel to Strengthen Infection Control Standards," January 22, 2003.

19 Charlene Hill, JCAHO Communications Director, information by phone, September 23, 2003.

20 "By the Numbers: Hospitals and Healthcare Systems," *Modern Healthcare*, December 2002, p. 12. U.S. Centers for Disease Control and Prevention, Division of Healthcare Quality Promotion, "About NNIS," download date, 9/8/03. The agency recently closed the program to new hospital participants.

21 Richards, Chesley et al, "Characteristics of hospitals and infection control professionals participating in the National Nosocomial Infections Surveillance System 1999," *Am J Infect Control* 2001; 29:400-403.

22 States with public reporting or public access to hospital-specific outcome or incident information include Texas, California, Ohio, New York, New Jersey, Colorado,

Pennsylvania, Maine, and Connecticut. The specific information that is collected, reported or available differs by state.

23 Huff, Charlotte et al, "Vital Signs," *Ft. Worth Star Telegram*, July 28, 2002.

24 Huff, Charlotte et al, "New Texas Hospital Report Cards Are Expected to Change the Culture of Secrecy," July 29, 2002.

Hannan, Ed, *Lessons Learned in Reporting Hospital Outcomes to the Public*, invited presentation, University of Iowa, College of Medicine, July 24, 2001. Hannan's research shows similar improvements related to public reporting for other states with mandatory reporting laws.

25 Hibbard, Judith et al, "Does Publicizing Hospital Performance Stimulate Quality Improvement Efforts?" *Health Affairs*, March/April 2003, p. 92.

26 Public Act 93-0563; SB 59, Illinois General Assembly, 2003.

House Bill 1629, 2004 Regular Session; amending Florida Statutes, Section 408.05 (3)(1)(1a). Senate Bill 1279, 92nd General Assembly, "The Missouri Nosocomial Infection Control Act of 2004," Missouri Revised Statutes, Department of Health and Senior Services, Sections 192.020, 192.021, 192.067, 192.131, 192.138, 192.665, 192.667, 197.150, 197.152, 197.154, 197.156, 197.158, 197.160, 197.162, 197.165, 197.293, 197.294.

27 Senate Bill 1487, 2003-2004 Regular Session; enrolled August 26, 2004. Bill vetoed by Governor Arnold Schwarzenegger, 9/30/2004, Governor's office, press release, September 2004.