

# Hospital Infection Fact Sheet

by Betsy McCaughey, Ph.D.

[betsymross@aol.com](mailto:betsymross@aol.com)

- *We have the knowledge to prevent hospital infection deaths.*
- *We don't have to wait for a scientific breakthrough.*
- *Yet many hospitals have failed to act.*
- *Overall, the infection rate in U.S. hospitals has been allowed to persist for over thirty years, and there is some evidence it may actually be increasing.*<sup>1</sup>

1. Infections contracted in hospitals are the fourth largest killer in the United States, causing as many deaths as AIDS, breast cancer and auto accidents combined. One out of every twenty hospital patients gets an infection. That's two million Americans a year<sup>2</sup>, and an estimated 103,000 of them die.<sup>3</sup>
2. The single most important way to reduce hospital infection, according to the federal Centers for Disease Control and Prevention, is for doctors and other health care workers to clean their hands in between treating patients. Research indicates that doctors clean their hands before treating a patient only 48% of the time, and this rate is significantly worse at some hospitals.<sup>4</sup>
3. Hospital infections add \$28 billion to \$30 billion to the nation's health costs each year. For example, a serious bloodstream infection increases a hospital stay by eleven extra days and adds, on average, \$57,000 to a patient's hospital bill.<sup>5</sup> Who pays? You do, regardless of who you are. Insurers pay. Employers who provide workers' health coverage pay. Taxpayers who foot the bill for Medicare, Medicaid, and other government programs pay.
4. Many hospital infections are preventable. Experience proves it. Improvements in intravenous catheter use, compliance with pre-surgical best practices, and better hygiene procedures—what most people assume hospitals require all the time—protect patients from infection. One of Salt Lake City's largest hospitals, Latter Day Saints, which already had an infection rate below the national average, reduced its rate by half between 1985 and 1995, largely by increasing how thoroughly doctors and nurses complied with pre-surgical best practices.<sup>6</sup>

At Mercy Health Center in Oklahoma City, the surgical infection rates for cardiac bypass, orthopedic surgery, colon and hysterectomy surgeries were reduced by 78% in one year.<sup>7</sup> Since 1999, hospitals in the Pittsburgh Regional Healthcare Initiative have been scrutinizing every aspect of hospital routine. They started with the most deadly type of infection—bloodstream infections that patients can get when hooked up to central venous catheters—and reduced the incidence of these infections by 20% in two years.<sup>8</sup> Allegheny General Hospital reduced central line bloodstream infections in its two intensive care units by 90% and deaths from these infections by 98%.<sup>9</sup>

A new study reports that Broomfield Hospital in England reduced infections in its orthopedic unit by

two thirds and totally eradicated *methicillin resistant Staphylococcus aurea* (MRSA) infections in one year. How? By methodical hand cleaning, rigorous adherence to hygiene, putting doctors in freshly laundered coats whenever they approached patients' bedsides, barring caregivers from wearing jewelry, restricting the movement of wheelchairs and other equipment, and other steps all designed to reduce the transmission of bacteria from infected patients to inanimate objects and then to other patients.

5. The United States lags behind several other countries in the prevention of one of the most deadly hospital infections, MRSA. It remains *a major threat* in the United States. It *is* preventable—MRSA is spread primarily by unclean hands and contaminated equipment. The United States, where most hospitals rely more on antibiotics than rigorous hygiene in an attempt to combat infection, has failed. Stark differences in hospital hygiene practices have led to dramatic differences in MRSA rates from country to country. For example Scandinavian countries, Holland and western Australia have succeeded in minimizing MRSA.
6. In the United States, secrecy has allowed the infection problem to fester. Twenty-one states collect data on infections that lead to death or serious injury. But nearly every state has given in to the hospital industry's demands to keep the information secret.<sup>10</sup> The federal Centers for Disease Control and Prevention also collect infection data from several hundred hospitals across the nation, but refuses to make it public. The industry argues that infection rates vary, in part, because hospitals treat different types of patients. Hospitals with AIDS, cancer, and transplant patients, who have weak immune systems and succumb to infection easily, should not be compared unfairly with hospitals who treat healthier patients. That's reasonable. But the data can be risk adjusted to make the comparisons fair. *What is unfair is keeping the public uninformed.*
7. In 2002, the British National Health Service (NHS) began publishing the names of hospitals with high infection rates in newspapers. On July 12, 2004, the NHS announced that every hospital will have to display its infection rate where patients can see it.<sup>11</sup> That's the right approach. Concealing infection rates may help hospitals save face, but it will not save lives or money.
8. Infection accounts for more deaths than lack of health insurance. The federal Institutes of Medicine recently estimated that as many as 18,000 people may die prematurely because they don't have health insurance.<sup>12</sup> That's tragic. But consider this even more tragic fact. Five times that many people die each year from hospital infections, and most of them *are* insured. Having insurance is no guarantee that you and your family will be safe in a hospital. The only way to ensure that is to clean up this deadly problem.

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<sup>1</sup> Though Weinstein's research indicates a steady rate (see note 2 below), other researchers have found some evidence of a rate increase: Patrick S. Romano, Jeffrey J. Geppert, Sheryl Davies, Marlene M. Miller, Anne Elixhauser, and Kathryn M. McDonald, "A National Profile of Patient Safety in U.S. Hospitals," *Health Affairs* (March-April, 2003). The authors report that between 1995 and 2000, nosocomial infection rates increased steadily. Their findings are based on Nationwide Inpatient Sample (NIS), the largest publicly available database from nearly 1,000 hospitals in 28 states. However much the infection rate may be increasing, it is certain that the infection risk is higher due to antibiotic resistance.

<sup>2</sup> Robert Weinstein, "Nosocomial Infection Update," *Journal of Emerging Infectious Diseases*, vol.4, no. 3. The infection rate, between 5 and 6 hospital-acquired infections per 100 admissions, has been steady for over the last 28 years, according to Weinstein's research.

<sup>3</sup> The Centers for Disease Control and Prevention previously estimated that 90,000 people die annually from infections they contract in U.S. hospitals, but the CDC press confirms that it is "working on a new number." *The Chicago Tribune* puts the death rate even higher, at 103,000. *The Chicago Tribune* examined hospital records, court records, and federal and state agency data pertaining to 5810 hospitals to reach its estimate. The CDC based their extrapolations on data voluntarily submitted by 315 U.S. hospitals: "How the Chicago Tribune Analyzed Infection Cases," *Chicago Tribune* (July 21, 2002).

<sup>4</sup> Interview with Nicole Coffin, spokesperson for the CDC, Infectious Diseases Division, October 10, 2002 (404-639-2888); See also Carloarena, M.D., et al., "Assessment of Handwashing Practices with Chemical and Microbiological Agents," *American Journal of Infection Control*, (October, 2002) vol. 30., no. 6.; Didier M. Pillet, M.D., "Improving Adherence to Hand Hygiene," *Journal of Emerging Infectious Diseases* vol. 4, no. 3.; Leela C. Blamnt, E. Louise Teare, William W. Williams, Jeremy D. Tuite, "Eradication of *Methicillin Resistant Staphylococcus Aureus* by 'ring fencing' of elective orthopedic beds," *British Medical Journal* vol. 329 (July 17, 2004).

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- <sup>5</sup> Saul N. Weingart, M.D., Ph.D., Lisa I. Iezzoni, M.D., MSc., "Looking for Medical Injuries Where the Light is Bright," *Journal of the American Medical Association* (October 6, 2003) vol. 290, no. 14.; Cassandro D. Salgado and Barry M. Farr, "MRSA and VRE: Preventing Patient to Patient Spread," *Infectious Medicine*, vol. 20, no. 4 (2003). The costs are derived thus: 2,000,000 infected patients x \$14,000 to \$15,000 average cost of treating an infection. Roberts, et. al., "Hospital Acquired Infection Economic Modeling," *Clinical Infectious Diseases* (vol. 36, no. 11) puts the cost at \$15,275; P.W.Stone, et. al., "A Systematic Audit of Economic Evidence Linking Nosocomial Infections and Infection Control Interventions 1990-2000," *American Journal of Infection Control* (2002) puts the cost at \$13,973.
- <sup>6</sup> Stanley L. Pestonick, "Implementing Antibiotic Practice Guidelines through Computer-Assisted Decision Support: Clinical and Financial Outcomes," *Annals of Internal Medicine* (May 15, 1996) vol. 124, no. 10. Among other strategies, LDS Hospital implemented a computer strategy to remind staff to give patients prophylactic antibiotics no later than two hours before surgery.
- <sup>7</sup> "How to Keep the Hospital from Making You Sicker," *Wall Street Journal* (September 11, 2003).
- <sup>8</sup> "Steps for Eliminating Central-Line Associated Blood Stream Infections," *Hospital News* (June 29, 2004).
- <sup>9</sup> "To Fix Health Care, Hospitals Take Tips from Factory Floor," *Wall Street Journal* (April 9, 2004); "Steps for Eliminating Central-line Associated Bloodstream Infections in 90 Days," *Hospital News* (July 14, 2004).
- <sup>10</sup> The National Center for State Health Policy is a good source for state policy in this area. Several states are considering bills to collect and publicly report infection rates for individual hospitals. See Missouri bill SB 1279 and Florida bill HB 1629. Pennsylvania will begin making hospital infection rates public within a year.
- <sup>11</sup> "Hygiene Crackdown to Tackle Rise of Hospital Superbugs," *The Independent* (London, July 12, 2004).
- <sup>12</sup> Institute of Medicine, *Insuring America's Health* (Washington, D.C., National Academies Press, 2004) 46.