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## **Press Release**

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### **Hospital infection rates decline using CDC model program**

In the United States, hospitals that conduct voluntary infection monitoring reported significant reductions in many hospital-acquired infections, according to CDC's March 3, 2000, *Morbidity and Mortality Weekly Report (MMWR)*. During the last decade, bloodstream infection rates declined 31–43 percent in intensive care units (ICU) in hospitals that participate in CDC's National Nosocomial Infection Surveillance (NNIS) system. CDC estimates that, each year, 2 million Americans acquire an infection during their hospital stay, with ICU patients at high risk for such infections.

In 1990, a 10-year national health objective was to reduce by at least 10 percent the incidence of surgical wound infections and other hospital-acquired infections in ICU patients in U.S. hospitals. A decade later, the 300 hospitals in 42 states that participate in CDC's NNIS met or surpassed those objectives.

Since 1990, bloodstream infection rates have declined 44 percent in medical ICUs, 43 percent in coronary ICUs, 32 percent in pediatric ICUs, and 31 percent in surgical ICUs. Between 1990 and 1999, hospitals voluntarily enrolled in NNIS also reported decreases in the number of respiratory and urinary tract infections acquired among patients during their hospital stay.

“These are dramatic decreases. Although we do not yet know the proportion of healthcare-associated infections that can be prevented, these data clearly demonstrate that voluntary monitoring and comparison to national benchmarks can prevent many adverse health events,” said Julie Gerberding, M.D., who leads CDC's Hospital Infections Program. “The

annual cost of ICU care in the United States is \$20 billion, more than 20 percent of all hospital costs. Infections not only add to the costs of care, but also contribute to or cause many deaths and complications. CDC has been focusing on preventing infections among ICU patients and we're now seeing the benefits of training and monitoring through NNIS."

NNIS is the only source of national data on hospital-acquired infections in the United States. Information gathered from 30 years of NNIS activities are used to advise hospitals on effective methods for preventing infections. "The recent Institute of Medicine (IOM) report estimated that adverse patient events account for 44,000 to 98,000 deaths each year. The value of a health-care monitoring system is demonstrated in NNIS," said Gerberding. "NNIS can serve as a model for similar patient protection systems in the United States."

NNIS data are used to evaluate infections in hospitals in the United States and to produce valid benchmark rates that can be used for comparison by hospitals following NNIS methodology. By law, CDC assures NNIS hospitals that any information that would permit identification of any individual or institution will be held in strict confidence. NNIS case definitions, monitoring methods, and benchmarks rates are published and widely used by hospitals not enrolled in the system.

"We have 30 years of experience in this and we've learned some important lessons. There are several components needed for an adverse health events monitoring system to be truly effective," explained Robert Gaynes, M.D., who heads the NNIS system. "Voluntary and confidential participation is important as is standardization of surveillance methods, uniform case definitions, and benchmarks for comparison across institutions."

Among the attributes of successful programs, is the number of infection control practitioners who are trained to use NNIS methods. "An important key to the NNIS system is having an infection control professional at the hospital who can design and implement prevention programs that promote patient safety in each setting," said Gaynes.

CDC included hospital-acquired infections as an important area of focus in its “Emerging Infectious Disease Plan for the 21<sup>st</sup> Century,” especially as they relate to antimicrobial resistance. “As we enter the 21<sup>st</sup> century, many drugs for treatment of common infections are losing their effectiveness and, in some cases, no effective drug is available. Pathogenic microbes can be dangerous foes, especially in a hospital setting,” noted James Hughes, M.D., director of CDC’s National Center for Infectious Diseases. “Collectively, these infections cause great suffering and represent a tremendous burden on society. Preventing as many healthcare-associated infections as possible is a high priority. The NNIS experience illustrates the potential effectiveness of aggressive prevention and control efforts.”

The CDC report on the decline of hospital-acquired infections comes on the eve of its international conference on healthcare-associated infections. Every ten years, CDC sponsors the conference to bring hospital infection experts worldwide together. The purpose of the March 5-9 conference in Atlanta is to establish new strategies to prevent infections among patients and healthcare personnel for the first decade of the 21<sup>st</sup> century. For more information about the conference and NNIS, visit CDC’s website at [www.cdc.gov/ncidod/hip](http://www.cdc.gov/ncidod/hip).

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