



Preventing Healthcare-Associated Infections



When people go to the hospital, they should not contract a preventable healthcare-associated infection (HAI). Unfortunately, HAIs affect 5 to 10 percent of hospitalized patients in the U.S. per year. Approximately 1.7 million HAIs occur in U.S. hospitals each year, resulting in 99,000 deaths and an estimated \$20 billion in healthcare costs.

CDC and its partners are testing the ability of various infection control strategies to prevent HAIs. One example is CDC's collaboration with the Pittsburgh Regional Health Initiative. This regional infection control intervention targeted a common type of HAI -- catheter-associated bloodstream infections (BSIs) -- that occur in intensive care units (ICUs). CDC provided technical assistance to hospitals, healthcare purchasers, and insurance



companies to design and promote a multi-faceted intervention based on CDC infection control recommendations. The Catheter-Associated BSI Prevention Strategy includes educational models and standardized tools for hospital staff, and comparison data for participating hospitals.

The intervention was implemented in 32 hospitals and 66 ICUs in southwestern Pennsylvania. CDC scientists

also helped local planners begin using CDC's National Nosocomial Infection Surveillance (NNIS) system, now called the National Healthcare Safety Network (NHSN), to more efficiently gauge their successes and failures in preventing and controlling infections. As a result of this collaboration with CDC, the participating hospitals were able to collectively reduce their infection rates among patients in ICUs by 68% in four years.

The work in Pennsylvania was soon followed by similar intervention and tracking efforts in 67 hospitals and 103 ICUs in Michigan. Using CDC guidelines and evidence-based interventions, hospital ICUs across Michigan saw up to a 66% reduction in catheter-associated BSIs over 18 months. Many successes have been so dramatic that the pilot projects' strategies have been adopted by large groups of hospitals. For instance, in California, six prevention collaboratives are currently adopting similar measures to prevent BSIs and other device-associated infections.

CDC's leadership in projects such as these can significantly influence hospital infection control practices nationwide. Infection control programs around the country are setting bolder prevention goals—and bolder prevention goals will likely translate into fewer HAIs. A 66% reduction of bloodstream infections nationally would translate into as many as 180,000 fewer BSIs, 20,000 fewer BSI-associated deaths and \$4-6 billion in healthcare cost savings.



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