HHS Sets Infection-Control Goals for Hospitals

BY MARY ELLEN SCHNEIDER
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Federal officials are seeking significant reductions in some of the most common health care–associated infections over the next 5 years.

In a new "action plan," the Department of Health and Human Services outlined goals related to six categories of health care–associated infections: central line–associated bloodstream infections, *Clostridium difficile* infections, catheter-associated urinary tract infections, methicillin-resistant *Staphylococcus aureus* (MRSA) infections, surgical-site infections, and ventilator-associated pneumonia.

The seven national prevention targets identified in the HHS action plan call for the following:

▶ Reducing the number of central line–associated bloodstream infections per 1,000 device days to below the current 25th percentile set by the National Healthcare Safety Network by location type.

▶ Achieving full compliance with the central line bundle in nonemergent insertions.

▶ Reducing by 30% the case rate per patient days and administrative/discharge data for ICD-9-CM–coded *C. difficile* infections.

▶ Reducing by 25% the number of symptomatic urinary tract infections per 1,000 urinary catheter days.

▶ Reducing by half the incidence rate of all health care–associated invasive MRSA infections.

▶ Reducing the median deep-incision and organ-space infection rate for each procedure/risk group to at or below the current National Healthcare Safety Network 25th percentile.

▶ Achieving 95% adherence rates for each Surgical Care Improvement Project/National Quality Forum infection process measure for surgical-site infections.

The national goals do not include targets for ventilator-associated pneumonia because HHS officials could not identify any valid outcome or process metrics for the condition. "This plan will serve as our road map on how the department addresses this important public health and patient safety issue," said Mike Leavitt, former HHS secretary.

The goals outlined by the HHS are "reasonable," said Kathy Warye, CEO of the Association for Professionals in Infection Control and Epidemiology. The action plan targets the most costly infections, both in terms of dollars and harm to patients, she said. The 5-year timeline also gives hospitals time to achieve reductions. At first, many hospitals may see increases in these infections, because the more you look, the more you find, Ms. Warye said.

The action plan may also play an important role by giving infection-control specialists more clout when they lobby their hospital administrators for resources for infection prevention, she said. "When the federal government gets into the act, it raises the stakes."

The action plan also addresses concerns that there has been a lack of coordination among the various federal agencies and departments that have some responsibility for health care–associated infections, said Dr. Patrick J. Brennan, chairman of the Healthcare Infection Control Practices Advisory Committee. Dr. Brennan, who served on the steering committee that prepared the report, said that improved coordination is especially important at a time when federal budget dollars are tight.

For example, the HHS plan addresses the role of information technology as a way to improve coordination of federal departments with databases of infection information.

The action plan also outlines a research agenda related to the prevention of health care–associated infections. At the top of the agenda are research into the barriers to adherence of recommended infection-control practices, and strategies to overcome those barriers. For example, the report calls for demonstration projects that are focused on the prevention of surgical-site infection, *C. difficile* infection, and MRSA.

The HHS also called for more basic, epidemiologic, and translational research into how health care–associated pathogens are acquired. Many of the current infection-control practices are based on empirical observation, according to the HHS. ■

The plan is available at www.hhs.gov/ophs/initiatives/hai.

Drug-Resistant Pneumonia Common

BY MITCHEL L. ZOLER
Philadelphia Bureau

PHILADELPHIA — Drug-resistant pathogens are common among patients with severe, community-acquired pneumonia who present to the emergency department and require mechanical ventilation, based on a retrospective study with 266 patients.

"One-fifth of the patients who came through the emergency department [with pneumonia requiring mechanical ventilation support] and could not be confirmed to meet the criteria for health care–associated pneumonia had a resistant organism," Dr. Matthew P. Schreiber said at the annual meeting of the American College of Chest Physicians.

This prevalence of drug-resistant pathogens among patients presumed to have community-acquired pneumonia was surprisingly high. The finding suggests that a severity-based guideline may work better than reliance on epidemiology to decide what empiric antibiotic regimen to use, said Dr. Schreiber, an internal medicine resident at the Washington (D.C.) Hospital Center.

For ICU patients with pneumonia who require mechanical ventilation, "antibiotic treatment to cover methicillin-resistant *Staphylococcus aureus* and *Pseudomonas aeruginosa* would be appropriate," he said.

The study examined records for patients who were admitted to the Washington Hospital Center during 2005-2007 who had a diagnosis of pneumonia and who required mechanical ventilation within 24 hours of hospitalization. Patients in the study also had microbiologic evidence of infection in a deep bronchial-brush specimen, blood culture, or urinary antigen, as well as clinical indication of infection from a primary source in their lungs. Isolates considered drug-resistant were methicillin-resistant *S. aureus*, *P. aeruginosa*, *Acinetobacter*, and pathogens producing an extended-spectrum β-lactamase.

Of the roughly 1,100 patients with pneumonia seen in the intensive care unit during each year studied at the hospital center, nearly 60% needed mechanical ventilation, and slightly more than 25% of these patients died during initial hospitalization. Microbiologic specimens were available for 147 patients identified with health care–associated pneumonia and for 119 patients with community-acquired pneumonia. In-hospital mortality was about 40% in both of these subgroups.

The high level of resistance in the patients with community-acquired pneumonia 'was eye-opening.'

DR. SCHREIBER

The prevalence of resistant isolates was 45% among the patients with a health care–associated infection and 21% among those who appeared to have community-acquired pneumonia. This high level of resistance in the patients with community-acquired pneumonia "was eye-opening to us," Dr. Schreiber said.

"The concept of health care–acquired pneumonia does not fully account for the amount of resistant infections in the community. We feel that current American Thoracic Society criteria for health care–acquired pneumonia may not be readily usable in the emergency department" to identify patients at risk of infection with drug-resistant strains, Dr. Schreiber said.

In settings in which drug-resistant pneumonia is relatively common, the empiric antibiotic regimen should include a drug active against many resistant strains, such as linezolid (Zyvox) or vancomycin, and imipenem, or a combination of piperacillin and tazobactam (Zosyn) and a second agent with *Pseudomonas* coverage, he said.

Dr. Schreiber said that he had no financial disclosures. ■

Consider Legionnaires Disease in Pneumonia

BY MIRIAM E. TUCKER
Senior Writer

WASHINGTON — Acute care hospitals were the most common source of health care–associated legionnaires disease reported to the Centers for Disease Control and Prevention during 2005-2007.

In that period, 94 cases of clinically compatible illness with laboratory evidence of legionellosis infection occurring within 10 days of inpatient health care exposure were reported to the CDC's supplemental legionnaires disease surveillance system (www.cdc.gov/legionella).

Acute care hospitals accounted for 88% of the reports, while long-term care and rehabilitation facilities contributed to 12%. Six of the total 41 facilities had clusters, ranging from two to four cases, indicating a "missed opportunity for prevention," Dr. Lauri A. Hicks and her associates reported in a poster at the jointly held annual Interscience Conference on Antimicrobial Agents and Chemotherapy and annual meeting of the Infectious Diseases Society of America.

Mean age of the patients was 61 years (range, 1-87), two-thirds were male, and most were white. The case fatality rate was high: 28 of 82 patients (34%) for whom the information was reported died of the infection.

Urine antigen was used to diagnose 71 (76%) of the cases, followed by culture in 11 (12%), direct fluorescent antibody in 3 (3%), and multiple methods in 9 (10%). It's important to obtain a respiratory specimen for *Legionella* in all potential cases in addition to the urine sample, because urine antigen testing is specific to *L. pneumophila* serogroup 1 and will not detect legionnaires disease caused by other *Legionella* species or serogroups, said Dr. Hicks and her associates of the CDC's National Center for Immunization and Respiratory Diseases.

Culture should also be used in addition to the urine antigen test because it allows for matching of clinical and environmental isolates so that the source can be identified and remediated. "A diagnosis of [legionnaires disease] should be considered in cases of health care–associated pneumonia. … Health care facility plans to systematically identify and reduce the environmental conditions that are conducive to *Legionella* growth may improve prevention," the investigators said.

Dr. Hicks had no financial disclosures. ■