Meeting the Challenge of Hospital Acquired Infections

By Barbara Youngberg
Introduction

Nosocomial or healthcare-associated infections (HAIs) can be contracted by patients while receiving medical treatment in healthcare facilities. These infections are a major yet often preventable threat to patient safety. Joined by healthcare and public health partners, the Center for Disease Control (CDC) and the Joint Commission are working to bring increased attention to HAIs and prevention methods. With the increased prevalence of superbugs (associated with the indiscriminate use and prescribing of antibiotics) and the emphasis on improving throughput in healthcare facilities (which can give rise to failures in terminal cleaning of procedural and patient rooms and equipment) HAIs remain a difficult problem to manage. Organizations like the Joint Commission and regulatory agencies such as the CDC and Center for Medicare and Medicaid Services (CMS) have recently advised the healthcare industry of new standards to better manage this problem that will soon take effect.

Recent Stories In The News

HAIs are an issue of significant concern for patients, infection control professionals, and risks managers. They can result in extended lengths of stay, delayed healing, and death. Additionally, HAIs can give rise to diminished reimbursement and costly malpractice claims.

In the last 12 months, reports of potential patient harm and deaths associated with HAIs have been featured prominently in the press:

❖ On August 19, representatives from Prince George’s Hospital in Cheverly, Maryland reported that pseudomonas bacteria was found in four sinks in the neonatal intensive care unit. The NICU has been closed since August 9, when nine babies were transferred from the hospital to the Children’s Hospital National Medical Center in Washington after three infants tested positive for the pseudomonas bacteria. According to a hospital spokesperson since the beginning of the year, seven infants in the NICU have died. The hospital spokesperson noted that the infants were premature and had complex medical problems saying, “Some were as small as one to two pounds.” Yet, she could not rule out whether the bacteria may have played a role in their deaths. “Our epidemiologists continue to investigate any links between the deaths of these babies and the presence of pseudomonas in our water supply, and we don’t have the answers to that yet.”
❖ On August 9, it was reported that employees of Memorial Hospital in Colorado Springs left patients at risk of infection by improperly cleaning devices, surgical instruments, and procedure rooms during a state inspection this year. The safety violations, which were discovered in April and May prompted Memorial Hospital’s leaders to vow sweeping
changes to the hospital's disinfection practices according to a Colorado Department of Public Health and Environment facility inspection report. State inspectors found that most often employees failed to follow manufacturers' instruction manuals for cleaning certain devices such as vaginal ultrasound transducers. The exact length of the violations was unclear though the report found they may have stretched on for years. One employee acknowledged improperly cleaning the ultrasound device for four years. Another former employee said problems began long before that.³

Numerous other reports beginning in 2015 state multiple patients have died and others have suffered serious life threatening infections after being exposed to CRE, a deadly Superbug resistant to most antibiotic treatment that kills 40 percent of infected individuals. The deadly pattern of illnesses emerged in 2012 as hospitals in Seattle, Pittsburgh, and Chicago noted a rise in CRE infections. “In each case, investigators identified the same source of transmission: a specialized endoscope, threaded down the throat of a half-million patients a year to treat gallstones, cancers and other disorders of the digestive system. They found that the devices, often called duodenoscopes, accumulate bacteria that are not always removed by conventional cleaning, so infections can pass from patient to patient.”⁴ Despite multiple advisories about this issue and specific instructions for cleaning these instruments, patients continue to be infected by contaminated endoscopes.

New Regulations From CMS Seek To Address Infection Control And Antibiotic Stewardship

On June 16, CMS proposed new regulations requiring hospitals and critical access hospitals to have "antibiotic stewardship" programs with certain and specific features.⁵ CMS stated that its goal in adding antimicrobial stewardship programs (ASPs) to the regulation of infection control is for hospitals, including critical access hospitals, to improve their antimicrobial prescribing practices and "curb" patients’ risk of possibly contracting deadly antimicrobial-resistant infections.

The agency has been expected to propose making ASPs a condition of participation in the Medicare and Medicaid programs for nearly two years; these regulations will make that a reality. The CMS proposal will require every hospital to appoint one qualified person, on the basis of recommendations by pharmacy and medical staff leaderships to lead the facility's ASP.⁶

The guidance provided by CMS suggests that the leader of the ASP would be responsible for the following:⁷
“development and implementation of the hospital-wide ASP, based on nationally recognized guidelines, to monitor and improve the use of antimicrobials; documentation of the program’s activities; communication and collaboration on antimicrobial-use issues; and competency-based training and education on the practical applications of antimicrobial stewardship guidelines, policies, and procedures.”

Furthermore, the program must

“show coordination among all the hospital’s staffs, services, and programs responsible for antimicrobial use and resistance; document the evidence-based use of antimicrobials throughout the hospital; demonstrate improvements in proper antimicrobial use by all departments and services of the hospital; adhere to nationally recognized guidelines and best practices for improving antimicrobial use; and reflect the scope and complexity of the hospital’s services.”

An excellent checklist was also developed by CMS\(^8\) that can be used by organizations to determine current readiness and aspects of an ASP that may still need to be developed.

**Response By The Joint Commission**

On June 22, the Joint Commission issued a prepublication version of a new antimicrobial stewardship standard for hospitals, critical access facilities and nursing care centers to become effective January 1, 2017.\(^9\)

**Medication Management (MM) Standard**

MM.09.01.01 is the new Joint Commission’s antimicrobial stewardship standard for hospitals, critical access hospitals, and nursing care centers. It was officially published in the *July issue of The Joint Commission Perspectives* newsletter. Additional resources that can be used to educate healthcare organizations and to assist them in preparing for compliance with this standard are available online.\(^10\)
Excellent Resource to Facilitate Planning Issued by the National Quality Forum

The National Quality Forum (NQF) has also developed the National Quality Partners Playbook: Antibiotic Stewardship available to organizations as they work through the fall to set up ASPs.  

The CDC’s Core Elements of ASPs are outlined below, and each links to the corresponding section in the National Quality Partners Playbook.

- **Leadership Commitment:** Dedicate necessary human, financial, and information technology resources.
- **Accountability:** Appoint a single leader responsible for program outcomes who is accountable to an executive-level or patient quality-focused hospital committee - experience with successful programs shows that a physician leader is effective.
- **Drug Expertise:** Appoint a single pharmacist leader responsible for working to improve antibiotic use.
- **Action:** Implement at least one recommended action, such as systemic evaluation of ongoing treatment need after a set period of initial treatment (i.e., “antibiotic time out” after 48 hours).
- **Tracking:** Monitor process measures (e.g., adherence to facility-specific guidelines, time to initiation or de-escalation), impact on patients (e.g., Clostridium difficile infections, antibiotic-related adverse effects and toxicity), antibiotic use, and resistance.
- **Reporting:** Report the above information regularly to doctors, nurses, and relevant staff.
- **Education:** Educate clinicians about disease state management, resistance, and optimal prescribing.

**Summary**

Infection control remains a challenge for most hospitals, CAFs, and nursing homes. Deaths and serious complications can cost organizations millions of dollars in claims and reduced reimbursement. New regulations seek to increase focus on the policies and practices necessary to control this significant problems, and renewing focus on this issue should be an organizational priority. Checklists and tools cited in this article can be valuable in assessing your current efforts and to identify opportunities for improvement.

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