Nonpayment for Harms Resulting From Medical Care
Catheter-Associated Urinary Tract Infections

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FIRST, DO NO HARM is one of the enduring principles of the health care professions. In a painful irony, however, the current reimbursement system not only fails to penalize hospitals for largely preventable harms due to medical care, but it often rewards them in the form of additional reimbursement. That paradigm will change, however, in response to a modification to the Inpatient Prospective Payment System (IPPS), which the Centers for Medicare & Medicaid Services (CMS) instituted on August 1, 2007. Following a congressional mandate, the CMS has reshaped the reimbursement system to hold hospitals accountable for failing to avert 8 largely preventable harms resulting from medical care.

The Rule Change Explained
To gain an understanding of the existing rule and subsequent rule change, the case of catheter-associated urinary tract infection (UTI), considered a high-priority condition by the CMS, is instructive. Under the status quo, a catheter-associated UTI can provide poorly performing hospitals with higher payments from the IPPS. The primary opportunity arises because the new Medicare Severity–Diagnosis Related Groups (MS-DRGs) are split into 2 or 3 classes based on the presence or absence of a complication or comorbidity or of a major complication or comorbidity. Notably, the “complication or comorbidity” DRG or the “major complication or comorbidity” DRG generates a higher Medicare payment than the basic DRG, regardless of whether the complication or comorbidity or the major complication or comorbidity was present at admission or resulted from the hospitalization.

Simply stated, the IPPS tolerates and even financially rewards poor performance by hospitals that fail to prevent hospital-acquired complications such as catheter-associated UTIs. For example, at the University of Colorado Hospital, the care of a patient with acute myocardial infarction discharged alive without a complication or comorbidity or a major complication or comorbidity would result in a Medicare reimbursement of $5436.66. The care of an identical patient with the complication or comorbidity of UTI would result in a reimbursement of $6721.44 and that of an identical patient with the major complication or comorbidity of Escherichia coli sepsis and infection due to indwelling catheter would result in a reimbursement of $8905.43.

The rule change is designed to eliminate these perverse financial incentives. Under the new rule, for patients discharged on or after October 1, 2008, with a complication or comorbidity of catheter-associated UTI, hospitals will be paid as if the complication or comorbidity were not present (ie, they will not receive additional payment) if the catheter-associated UTI was not present at the time of the patient’s admission to the hospital. To facilitate the determination of a present-on-admission condition, the CMS has developed a present-on-admission indicator that must be reported for each secondary condition on claims for all discharges on or after January 1, 2008.

Although the legislation required the selection of at least 2 hospital-acquired conditions, the CMS, in consultation with the US Centers for Disease Control and Prevention (CDC), concluded that 8 hospital-acquired conditions met the statutory criteria and would be selected for the initial round of reforms (Box). Among those selected by the CMS,
catheter-associated UTI received a high priority because it met the basic conditions of having a high cost burden and high volume burden, being considered a complication or comorbidity (and therefore identifiable through unique diagnosis codes), and having accepted prevention guidelines.

**The Challenge of Catheter-Associated UTI**

Among hospital-acquired conditions, catheter-associated UTI presents an interesting challenge. Hospitals use indwelling urinary catheters more than almost any other medical device. By so doing, however, indwelling catheters are associated with unforeseeable and largely preventable UTIs. The use of indwelling urinary catheters accounts for 80% of nosocomial UTIs—estimated at up to 1 million cases annually—and 40% of all nosocomial infections. The consequences of a UTI range from an additional hospital day to bacteremia, prosthetic joint infection, and death. In total, nosocomial UTIs cost the health care system more than $400 million annually.

Urinary tract infections are generally considered unavoidable in patients having indwelling catheters for more than 4 days, primarily due to the ubiquity of bacterial colonization over time. An estimated 5% of patients will become colonized for each day of catheterization beyond 48 hours, and 10% to 25% of colonized patients will develop symptomatic UTIs. Therefore, patients who require intermediate-term or chronic indwelling catheters will necessarily have some baseline rate of catheter-associated UTI. The majority of patients, however, do not require catheters for extended periods. For these patients, the risk of developing a catheter-associated UTI depends on several modifiable factors, including the method and duration of catheterization and catheter care.

The CDC first published a guideline for the prevention of catheter-associated UTIs in 1981, that guideline is currently undergoing its first revision. (Until that revision is complete, the Joanna Briggs Institute guideline from 2000 addresses some of the same processes of care and incorporates newer evidence.) The original CDC guideline outlines a set of low-technology and widely available methodologies, including recommendations such as “urinary catheters should be inserted only when medically necessary and left in place only for as long as necessary.” However, in the presence of competing demands on clinical staff, transfers of care across settings, poor documentation of catheter insertion, and lack of accountability for catheter removal, oversight and awareness of urinary catheter use is inconsistent at best.

In a study exploring rates of catheter-associated UTIs in Medicare beneficiaries undergoing selected major surgeries, we illustrated the significance of urinary catheter management practices. In this sample, 85% of patients undergoing major surgery had perioperative urinary catheters, with nearly 50% of patients having postoperative catheter duration exceeding 48 hours. Furthermore, in-hospital infection rates were twice as high for patients with catheter duration greater than 48 hours at 14 days of follow-up, and catheter duration of greater than 2 days was the strongest modifiable risk factor for UTI. Improving catheter management is therefore a logical basis for interventions to decrease catheter-associated UTI. While there are no large multicenter trials to date, several single-institution prospective studies have examined multimodal UTI prevention interventions. These studies have used nurse and physician education, surveillance and feedback, computerized prompts, nursing-driven protocols, and various technologies (bladder scanners, silver-alloy catheters) to achieve reductions in catheter-associated UTIs by 46% to 81% in a variety of inpatient settings.

**To Pay or Not to Pay for Catheter-Associated UTI**

It is not surprising that the CMS placed a high priority on reducing catheter-associated UTI. A direct consequence of the reform is likely to be an immediate change in the behavior of clinicians and hospitals. Whereas catheter-associated UTI was once considered an inevitable consequence of hospitalization, it now will be appropriately viewed as an unacceptable harm resulting from medical care. This paradigm shift should force clinicians and hospitals to revisit how they manage urinary elimination as well as the proper role of the indwelling urinary catheter in hospitalized patients. In short, confronted with the risk of financial losses for maintaining the status quo, clinicians and hospital administration will now face powerful incentives to address this neglected aspect of care.

Certainly, this reform is not perfect. The new rule, for example, may result in some claims triggering the financial penalty, even though the catheter-associated UTI might not have been preventable. One response to this problem would be to exclude from the rule those patients who require intermediate- or long-term catheters as part of their medical care, ie, patients with diseases of the urinary tract or adjacent structures, for whom the catheter is critical to the management of urinary elimination. However, the legislation that authorizes this rule does not exclusively focus on scenarios in which the condition is absolutely preventable. For absolutely preventable harms (the so-called never events, eg, leaving a foreign object in a patient after surgery), hospitals already have a powerful financial incentive to avoid such egregious errors—the malpractice suit. This change, by contrast, addresses “reasonably preventable events”—ie, those that are neither uniformly preventable nor inevitable.

The most controversial aspects of the rule change are technical. In particular, the appropriate differentiation of hospital-acquired conditions from present-on-admission conditions is challenging from clinical as well as administrative perspectives. If, as a result of the rule change, clini-
cians were pressured to test the urine of all patients on admission to the hospital, the risk of overtreatment of asymptomatic bacteriuria or inflammation would be substantial. Additionally, the rollout of the present-on-admission coding has proven difficult. The codes for present-on-admission conditions were released only 1 year ago, raising concerns about their reliability in the absence of adequate physician education or of training and support for coders. Recognizing these technical difficulties, the CMS pushed back the start date for present-on-admission coding to January 1, 2008.

Conclusion

Avoiding reasonably preventable harms such as catheter-associated UTIs is a major challenge for the health care enterprise. All too often, clinicians, hospitals, and payers conclude that some harms are part of the price of doing business. But in many cases they are not. When properly designed, financial incentives should provide rewards for desired clinical outcomes, not hospital-acquired harms. Such incentives will promote a commitment to reducing hospital-acquired harms such as catheter-associated UTIs. The answer to the question of whether to pay for preventable harms resulting from medical care may be found in a corollary of the classic dictum: “First, do not pay for harm.”

Financial Disclosures: None reported.

Funding/Support: Dr Wald is supported by a Hartford/Jahnigen Center of Excellence in Aging Junior Faculty Award.

Role of the Sponsor: The Hartford/Jahnigen Center of Excellence in Aging had no role in the collection, management, and interpretation of the data or the preparation, review, or approval of the manuscript.

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