Hospital-Acquired Conditions: Knowing, Preventing, and Treating Them Can Make RDs and DTRs an Invaluable Part of the Health Care Team

THEY'RE A PATIENT'S WORST nightmare and the recipe for a lawsuit. Each year, the Centers for Disease Control and Prevention estimates that hospital-acquired conditions (HACs) number in the millions and result in billions of dollars lost in reimbursements to health care providers. These incidents can significantly damage one's credibility and potentially spark litigation. Registered dietitians (RDs) can play a lead role within the teams they work because a number of HACs are related to nutrition. Awareness of these conditions and how nutrition can factor into their cause, as well as treatment, can also make the RD an invaluable player in a number of environments. As quality control becomes an increasingly important measure in determining reimbursement, the skills possessed by an RD can increase their value to health care teams. Correctly identifying these issues before they advance in acuity can save providers a substantial amount of money and improve overall quality scores. Ultimately, education is the primary tool to prevent and treat events that, by definition, should never happen.

SIMILAR PROBLEM, DIFFERENT TERMS

In broaching the topic, the terms *Hospital-Acquired Conditions* and *Never Events* might seem interchangeable depending on the speaker, but in point of fact they represent entirely different sets of conditions. The term *Never Events* refers to the list of serious reportable events first endorsed by the National Quality Forum (NQF) in 2002 (1), a compilation of 28 occurrences classified under any of six categories:

- surgical;
- product or device;
- patient protection;
- care management;
- environment; and
- criminal.

The term *Never Events* was first introduced in 2001 at the NQF by Ken Kizer, MD, MPH, current director of the Health Improvement Center at the University of California at Davis, in response to what was determined to be a large number of preventable incidents.

Meanwhile, the term *Hospital-Acquired Conditions* refers to regulations set in place with the passage of the Deficit Reduction Act of 2005, which required a quality adjustment in Medicare Severity Diagnosis-Related Group payments for certain hospital-acquired conditions. The Centers for Medicare and Medicaid Services (CMS) titled the provision "Hospital-Acquired Conditions and Present on Admission Indicator Reporting" (2). According to Section 5001c of the Deficit Reduction Act, HACs were initially defined by their meeting of at least two conditions that:

- are high cost, high volume, or both;
- result in the assignment of a case to an Medicare Severity Diagnosis-Related Group that has a higher payment when present as a secondary diagnosis; and
- could reasonably have been prevented through the application of evidence-based guidelines.

The statute also allows the CMS to revise its list of conditions, granted they meet those guidelines (2).

As Nancy Collins, PhD, RD, LD/N, FAPWCA, observed, the lists have some cross-over, although knowing the difference can determine whether one is reimbursed or declined payment. Increasing one's awareness of the overall concept is the best way to avoid the occurrences in any case.

Collins is founder and executive director of RD411.com, Inc, as well as the coauthor of a session titled "CMS Never Events and Litigation: A Roadmap to Stopping Never Events," delivered at the Academy of Nutrition and Dietetics' 2011 Food & Nutrition Conference & Expo (3) along with Courtney H. Lyder, ND, RD, FAAN, dean and professor of the school of nursing at the University of California, Los Angeles. The session provided information about these events and ways to prevent litigation. A nationally recognized expert on wound care and medical litigation, Collins said that depending on which source one uses, the number of preventable incidents could range up to 42 and they can change over time. Not enough RDs are aware of these incidents as they pertain to reimbursement though, and further education is crucial.

HACs DEFINED

The October 2010 CMS list of events no longer reimbursed (2) includes:

- foreign object retained after surgery;
- air embolism;
- blood incompatibility;
- stage III and IV pressure ulcers;
- falls and trauma (fracture, dislocation, intracranial injury, crushing injury, burn, electric shock);
- catheter-associated urinary tract infection;
- vascular catheter-associated infection;
- manifestations of poor glycemic control (diabetic ketoacidosis,

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nonketotic hyperosmolar coma, hypoglycemic coma, secondary diabetes with ketoacidosis, secondary diabetes with hyperosmolarity);

- surgical site infection, mediastinitis, following coronary artery bypass graft;
- surgical site infection following certain orthopedic procedures (spine, neck, shoulder, elbow);
- surgical site infection following bariatric surgery for obestity (laparoscopic gastric bypass, gastroenterostomy, laparoscopic gastric restrictive surgery); and
- deep vein thrombosis and pulmonary embolism following orthopedic procedures (total knee replacement, hip replacement).

The CMS states that: "For discharges occurring on or after Oct. 1, 2008, hospitals will not receive additional payment for cases in which one of the selected conditions was not present on admission. That is, the case would be paid as though the secondary diagnosis were not present" (2).

The NQF list of serious reportable events includes:

- Surgery performed on the wrong body part.
- Surgery performed on the wrong patient.
- Wrong surgical procedure performed on patient.
- Unintended retention of a foreign object in a patient.
- Artificial insemination with the wrong sperm or donor egg.
- Intraoperative or immediately postoperative death in an American Society of Anesthesiologist class I patient.
- Patient death or disability associated with use of contaminated drugs, devices, or biologics provided by the health care facility.
- Patient death or serious disability associated with the use or function of a device in patient care, in which the device is used for functions other than as intended.
- Patient death or disability associated with intravascular air embolism that occurs while being cared for in a health care facility.
- Infant discharged to the wrong person.
- Patient death or serious disability associated with patient elopement (disappearance).
- Patient suicide or attempted suicide resulting in serious disability, while being care for in a health care facility.
- Patient death or serious disability associated with a medication error.
- Patient death or serious disability associated with a hemolytic reaction due to the administration of ABO/human leukocyte antigen (HLA)-incompatible blood or blood products.
- Maternal death or serious disability associated with labor or delivery in a low-risk pregnancy while being cared for in a health care facility.
- Patient death or serious disability associated with hypoglycemia, the onset of which occurs while the patient is being cared for in a health care facility.
- Death or serious disability (kernicterus) associated with failure to identify and treat hyperbilirubinemia in neonates.
- Stage III or IV ulcers acquired after admission to a health care facility.
- Patient death or serious disability due to spinal manipulative therapy.
- Patient death or serious disability associated with an electric shock or electrical cardioversion while cared for in a health care facility.
- Any incident in which a line designated for oxygen or other gas to be delivered to a patient contains the wrong substances, or is contaminated by toxic substances.
- Patient death or serious disability associated with a burn incurred from any source while being care for in a health care facility.
- Patient death or serious disability associated with a fall while being cared for in a health care facility.
- Patient death or serious disability associated with the use of restraints or bedrails while being care for in a health care facility.
- Any instance of care ordered or provided by someone impersonating a physician, nurse or pharmacist, or other licensed health care provider.
- Abduction of a patient of any age.
- Sexual assault on a patient within or on the grounds of the health care facility.
- Death or significant injury of a patient or staff member resulting from a physical assault that occurs within or on the grounds of the health care facility.

NUTRITION LEADERS AS HEALTH CARE LEADERS

Collins, speaking from her office, explains that nutrition plays a significant role in the treatment and prevention of multiple HACs and Never Events. In particular, these include stage III and IV pressure ulcers, manifestations of poor glycemic control, surgical site infections, and falls.

RDs in the field understand the role nutrition plays in these particular issues and support is well documented. In her own presentation on the topic, Collins references one 15-study meta-analysis finding that enteral nutritional support, particularly high protein oral nutritional supplements, can reduce the risk of developing pressure ulcers (4), and she notes that poor nutrition is a contributing cause of pressure ulcers in 61% of cases.

Collins said that nutrition also factors in the prevention of falls, explaining that patients can lose lean body mass while hospitalized, weakening their muscles, and increasing fatigue. Poor nutrition hinders the body's recovery process, and she observed that it's tough to do physical therapy without the energy provided by proper nutrition.

"If you don't eat for three days it's hard to do your physical therapy," she remarked.

Regarding infection control, every wound care team should have an RD because of the relationship between wound care and nutrition; but for RDs to play their role, continuing education is a must.

RDs might already know their roles and the impact nutrition plays in recovery and treatment, but communicating this relevance as it relates to HACs and potential reimbursement cuts is essential, Collins said.

Other health care providers have also recognized this need, and in March the Philadelphia, PA–based health care information services provider Elsevier launched an online tool to help nurses prevent the HACs identified by the CMS. The database is available on Elsevier's Mosby's Nursing Consult Web site (www.nursingconsult.com) in the section titled "Never Events."

Each HAC is matched with appropriate articles, reports, monographs, and studies. Nurses who access the sections are able to review the medical definition of each HAC, evidence-based nursing content, books, imaging, and news updates. The online tool also includes decision-making guidance on six conditions currently under review by CMS for inclusion into the HAC list: delirium, ventilator-associated pneumonia, *Staphylococcus aureus* septicemia, *Clostridium difficile*-associated disease, Legionnaire's disease, and iatrogenic pneumothorax. This Web site is available to RDs as subscribers, but other resources are also online.

Collins founded and operates www.RD411.com, which features an online database of articles and relevant research in the field of health care and nutrition. Her course on the topic and its relationship to malpractice lawsuits is available through Abbott Nutrition Health Institute, and can be used by RDs for continuing education credit. Collins expressed the need for more continuing education on this topic. She says the difficult part is that nobody seems to be talking about this.

On the other hand, the potential of HACs to spark litigation is a concern shared by all in health care, and Collins said explaining the financial and career impact that these events can have is a big motivator.

MISTAKES ARE COSTLY

The Centers for Disease Control and Prevention estimates approximately 1.7 million hospital-associated infections occur each year in US hospitals (5). Of these, an estimated 98,987 resulted in deaths. Overall, hospital-associated infections alone are believed to add $20 billion a year to the nation's health costs (6).

As Collins explained in her presentation at the Academy's Food & Nutrition Conference & Expo, the initial goal of the NQF was to identify errors and develop a system that improved patient safety. The project began as part of a federally funded, five-state pilot project to organize the reporting of adverse events. The list, she states, was never originally intended to become a payment tool. Over the years, however, the process has culminated in these incidents being labeled unacceptable for payment, and in some cases hospitals will simply not charge the patient because a denied charge could be used in a malpractice suit, she said.

This shift has made the proper identification, documentation, and coding of conditions extremely important so as to note them as present on admission, if applicable.

But the raw numbers of lost reimbursement is substantial. Citing CMS data (3), Collins noted that in 2007, 257,412 cases of stage III and IV pressure ulcers were reported at a cost-per-stay of $43,180. Some 193,566 cases of "falls and trauma" were reported that year at $31,894 each. Deep vein thrombosis/pulmonary embolism tabbed 140,010 cases at $50,937 each. And vascular catheter-associated infections were reported at a volume of 29,536, costing $103,627 each. With the gross total of billings affected by pressure ulcers alone coming in at more than $1.1 billion, the overall impact on revenue is significant. And it's a trend that she observed is already being followed by companies such as Wellpoint (Indianapolis, IN), the nation's largest commercial insurer.

The move toward reimbursing based on quality is already underway, Collins said, predicting that hospitals graded in the top 20% of quality standards will soon be incentivized monetarily. Hospitals in the bottom 20% will be penalized. Health care specialists who focus on post-discharge treatment are becoming increasingly important as hospital emergency departments don't want patients readmitted for fear of negative ratings. The roles RDs can play in these arenas are substantial if they understand the language, know what to look for, and know how to manage the process.

"So there are going to be a lot of opportunities for dietitians in home care," she said, explaining that regardless of the quality of an emergency department physician's care and instruction, a patient's failure to follow proscribed nutritional guidelines can negatively affect their outcome. The term discharge is becoming obsolete given that reimbursements will be determined, in part, on readmission rates, and those rates are impacted by what occurs after the patient leaves the facility. Thus, hospitals are looking to partner with home-care agencies, and those agencies will be graded on their ability to lower readmission rates, she said. Agencies with RDs on the staff will have more success than those that do not, she added, noting the number of patients who lose lean body mass while in the hospital and require nutritional consideration once home.

This creates just one of many opportunities for RDs who are aware of the issues. From educating other health care workers on the importance of recognizing HACs, to prevention and treatment, clinical facilities have a vested interest in using nutrition as a tool. Given the role nutrition plays in issues such as falls, the potential for RDs to be placed on quality control panels within an institution is present. Also, just as diabetes education opened the door for many RDs to gain prominence within facilities, the role nutrition plays in pressure ulcers can do the same. RDs should consider their value in offering consultation services to other health care providers, including orthopedic surgeons who perform hip and other joint replacements as these procedures often place patients in bed for extended periods of time. The key to accessing these opportunities will require education and collaboration, both of which present opportunities in and of themselves.

Nationally, there is concern about whether progress is truly being made. A statewide study of 10 North Carolina hospitals tracked harm resulting from medical care over a 6-year period ending in December of 2007 (7). Researchers determined that patient harm was common and the quantity of incidents did not decrease over time. In 2,341 adult admissions reviewed, there were 25 episodes of harm per 100 admissions, with 18% unique patient admissions that had incidents determined to be of harm. That rate was deemed unacceptable given the amount of awareness one would expect in a health care facility.

Although disappointing, the absence of apparent improvement is not entirely surprising. Despite substantial allocation and efforts to draw attention to the patient safety epidemic on the part of government agencies, health care regulators, and private organizations, the penetration of evidence-based safety practices has been quite modest. For example, only 1.5% of hospitals in the United States have implemented a comprehensive system of electronic medical records, and only 9.1% have even basic electronic record keeping in place; only 17% have computerized provider order entry. Physicians-in-training and nurses alike routinely work hours in excess of those proven to be safe. Compliance with even simple interventions such as hand washing is poor in many centers (7).

Meanwhile, Collins noted that in 2003, Minnesota became the first state to pass laws requiring the mandatory reporting of 27 NQF measures to the state hospital association. By 2006, this resulted in the reporting of 154 adverse events out of more than 8 million visits. This total included 48 pressure ulcers, 42 retained objects, 23 wrong-site surgery, and 12 falls. By 2008, the state report showed a decrease of events from the year prior; however, a total of 125 events were still recorded from 38 hospitals and four surgery centers. These included 13 deaths and 10 serious disabilities. The most common issue was once again pressure ulcers.

THREATS AND OPPORTUNITY

An entire team of health care professionals can be at risk if one member fails to fulfill their role. Consider the impact nutrition plays in a patient's physical energy levels. In the hypothetical example where a patient, weakened by lack of nutrition, does not perform their requisite physical therapy, the entire network of health care professionals could be at risk. Trauma related to falls is just one of the HACs that could ensue in any number of patients undergoing different procedures ranging from hip replacements to spinal injury. The ability RDs possess to treat pressure ulcers is just another example of their value to the overall team, which in the end gets judged together. The importance that nutrition plays in the overall scope of wellness is something RDs can actively promote throughout the course of their work. Understanding that reimbursement potentially hangs in the balance makes for just one additional argument RDs have on their side as they take leadership roles within the field. And as the cost of health care continues to dominate national headlines, the amount of losses written off by hospitals and providers will likewise continue, right along with patients' concerns for well-being.

References

1. National Quality Forum. Serious Reportable Events. http://www.qualityforum.org/Publications/2008/10/Serious_Reportable_Events.aspx. Accessed October 11, 2011.
2. Centers for Medicaid and Medicare Services. "Hospital-Acquired Conditions and Present on Admission Indicator Reporting." Hospital-acquired conditions (HAC) in acute inpatient prospective payment system (IPPS) hospitals. https://www.cms.gov/HospitalAcqCond/Downloads/HACFactsheet.pdf. Accessed December 21, 2011.
3. Collins N, Lyder CH. CMS Never Events and litigation: A roadmap to stopping never events. Abbott Nutrition Health Institute Web site. http://anhi.org/learning/coursedetail.aspx?ID=D9F6EF9391FF4B58BA74C8D72F166F5F. Accessed December 21, 2011.
4. Stratton RJ, Ek A-C, Engfer M, et al. Enteral nutritional support in prevention and treatment of pressure ulcers: A systematic review and meta-analysis. *Ageing Res Rev*. 2005;4:422-450.
5. Monina KR, Edwards JR, Richards CL Jr, et al. Estimating health care-associated infections and deaths in U.S. hospitals, 2002. *Public Health Rep*. 2007;122:160-166. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1820440/pdf/phr122000160.pdf. Accessed December 21, 2011.
6. Anand P; Health Care Infection Control Practices Advisory Committee. HHS efforts to reduce health care-associated infections. http://www.cdc.gov/hicpac/pdf/HHSpresentationHICPAC_11_08.pdf. Accessed December 21, 2011.
7. Landrigan CP, Parry GJ, Bones CB, Hackbarth AD, Goldmann DA, Sharek PJ. Temporal trends in rates of patient harm resulting from medical care. *N Engl J Med*. 2010;363:2124-2134.