Hospital-acquired pressure ulcers are expensive, painful, and often—but not always—preventable. Before October 2008, hospitals could receive additional payment for a pressure ulcer diagnosis as a comorbidity, whether as present-on-admission (POA) or a hospital-acquired event. This additional payment served as a type of perverse incentive because hospitals could be financially rewarded when a patient experienced a hospital-acquired pressure ulcer (HAPU). In response, two Medicare programs have been initiated with the dual goals of motivating hospitals to prevent pressure ulcers while also reducing spending by removal of payment related to pressure ulcers. First, the Centers for Medicare & Medicaid Services (CMS) Hospital-Acquired Conditions Initiative, implemented in October 2008, greatly changed payment for pressure ulcers by removing all pressure ulcers as payable comorbidities in administrative data except for POA stage III or IV pressure ulcers. The initiative’s implementation required use of POA status codes and new stage-specific codes to provide in addition to location-specific diagnosis codes in administrative data. With these new codes, administrative data were transformed from a dataset in which hospital incidence rates of pressure ulcers (unknown status at admission, unknown stage) that were billed as diagnoses for requesting payment to a dataset that could be used to easily calculate incidence rates of stage-specific pressure ulcers (such as hospital-acquired stages III or IV) to publicly report, compare hospital performance, and penalize hospitals accordingly. As a next step, the Hospital-Acquired Conditions Reduction Program, implemented in October 2014, generates composite complication scores for pressure ulcer events and other hospital-acquired conditions, as assessed by the Agency for Healthcare Research and Quality’s (AHRQ’s) Patient Safety Indicators (PSIs) algorithms applied to administrative data, for hospital comparison and penalization of the hospitals with the highest (that is, worst) complication rates by reducing overall Medicare payments.

In this issue of The Joint Commission Journal on Quality and Patient Safety, Padula and colleagues present two analyses of administrative data–derived diagnoses of HAPUs as outcomes (1) to assess the effectiveness of a bundle of evidence-based strategies to prevent HAPUs and (2) to determine whether the payment changes for pressure ulcers led to improved patient outcomes. In short, as hoped, the incidence rates of advanced-stage (III, IV, or unstageable) pressure ulcers decreased as diagnoses in administrative data after the 2008 enactment of nonpayment for HAPUs in the University HealthSystem Consortium hospitals that were implementing pressure ulcer prevention bundles. Yet to provide some context for interpretation of these lower HAPUs incidence rates, it is critical to review how the HAPU outcome data are generated, as well as other influences on HAPU diagnosis rates in administrative data beyond the Medicare policies and the interventions implemented in these same hospitals.

Although it may seem like a simple policy to remove payment for HAPUs in the Hospital-Acquired Conditions Initiative, the policy’s implementation is fairly complex. The new requirements for documenting the POA status for each diagnosis and the availability of new codes to identify pressure ulcers by stage were provided as additions to the federal requirements that hospital coders must follow to identify any diagnoses to list in the administrative data used to submit bills (that is, claims). In brief, a hospital coder can and should list a pressure ulcer diagnosis (like all diagnoses affecting the patient’s treatments needed and morbidity) if it is indicated as a diagnosis in “provider” documentation—defined as inpatient documentation generated by physicians, physician assistants, or nurse practitioners. Then, for pressure ulcers that are noted in provider documentation, the hospital coder can obtain the location or stage-specific details for the pressure ulcer from other documentation, such as nursing assessments or wound care team notes. Yet the hospital coder cannot list a diagnosis of a pressure ulcer if it is noted only in nursing documentation when it has not been acknowledged in the provider documentation, without seeking further clarification and documentation by the provider. Thus, advanced pressure ulcer diagnoses can and do occur, even with documentation in the medical record by nurses (who are often more experienced than physicians at skin assessments), and nonetheless not result in the pressure ulcer event’s inclusion in the administrative discharge data.

There are three types of underreporting of HAPUs that can occur in administrative data. First, pressure ulcer diagnoses can be listed by location codes without any stage-specific code included to identify it as an advanced-stage pressure ulcer. In the earlier years of the Hospital-Acquired Conditions Initiative, this was not un-
common because only 8 secondary diagnosis codes could be included on claims data submitted for payment. It is hoped that such underreporting has become less frequent since January 2011, after which 25 diagnoses could be listed.9 Second, the status of a pressure ulcer can be incorrectly listed as POA when it was hospital acquired.10 Third, the pressure ulcer diagnosis may not be listed at all in administrative data when it was not noted within provider documentation that hospital coders review, even if it is noted in other documentation. Is completely missing a pressure ulcer diagnosis in administrative data less likely to happen for advanced-stage ulcers such as stage III or stage IV than lower-stage ulcers? Possibly, because it is logical that the former would require more evaluation or wound care treatment orders by physicians than the latter. However, despite expectations that hospitals code claims data accurately and completely to identify hospital complications11 with the potential for audits, there remain no mandates or required processes for hospital coders to follow to comprehensively scour all types of inpatient documentation for advanced-stage ulcers for reporting to look for underreporting of pressure ulcer diagnoses in provider documentation. Patients who have developed advanced-stage pressure ulcers are also likely more complex and severely ill than the average patient; busy providers of these patients may prioritize documentation of other medical problems (such as sepsis, shock, and respiratory or other organ failure) in their daily notes as the diagnoses that prompted and justify the continued hospital admission, with less attention devoted to documentation of pressure ulcer as a diagnosis. Therefore, despite expectations and detailed coding guidelines, hospital reporting of HAPUs in claims data remains on the honor system in a setting of multiple policies in place that incentivize having lower HAPU incidence rates in claims data.

Although administrative data generated by hospital coders can now be used to easily generate rates of stage-specific and POA HAPUs, the data collection process remains very different than a surveillance methodology—and might at best be described as a type of “pseudosurveillance” data. There are two major methods for surveillance in use for studying pressure ulcers in acute care hospitals. One type involves periodic bedside prevalence evaluations of all patients, using teams of trained clinicians dedicated to the systematic detection, classification, and reporting of pressure ulcers in addition to comprehensive review of medical records; this method is considered the gold standard and has been employed by the California Nursing Outcomes Collaborative (CALNOC)12 and the National Database of Nursing Quality Indicators (NDNQI).13 According to HAPU incidence rates as generated by this type of method in the CALNOC from 2003 through 2010,14 HAPUs have been steadily decreasing in reporting hospitals, even before the payment reductions for pressure ulcers. A second method, used by the Medicare Patient Safety Monitoring System (MPSMS),15 involves a comprehensive review of all medical records (including nursing and physician documentation) for random samples of patients to detect pressure ulcers as adverse events; however, the MPSMS chart abstraction algorithms (updated in 2012) do not yet categorize HAPUs by stage. MPSMS trend data from 2005 through 2011, in which all HAPU stages were considered, demonstrated a steady HAPU rate of approximately 5%, showing no significant improvement when the years before and after removal of payment for HAPUs were compared.16 This lack of change in HAPU rates using MPSMS data is concerning as a contrast to the decreases in administrative data reported by Padula et al.6,17 because the interventions implemented in response to the payment changes would be anticipated to decrease pressure ulcer incidence rates for both early and advanced stages. This is because interventions to prevent initial development of ulcers would be expected to be more successful than interventions to halt progression from a stage II to a stage III in many patients. Therefore, although Padula and colleagues’ analyses identified a statistically significant link between the incidence rate of pressure ulcers before and after initiation of nonpayment for pressure ulcers, it remains a bit of a leap to causatively attribute the improved incidence rates in administrative data to higher-quality care delivered as a consequence of nonpayment. As several studies assessing trends of pressure ulcers over time have detailed,13,14 pressure ulcer incidence rates peaked in the early 2000s, just as interest grew in development and implementation of bundles of interventions to prevent pressure ulcers in addition to systematic categorization and reporting of pressure ulcers by motivated hospitals.

What does the decrease in administrative discharge incidence rates of HAPUs mean? Such a finding would not be unexpected, given decreases that have been seen for years in studies using more rigorous surveillance methods.13 However, the rather precipitous reduction in administrative data incident rates, as shown in Figure 1 by within one quarter of the year before initiation of nonpayment occurred faster than is usually anticipated when multicomponent quality improvement interventions are implemented. Pressure ulcer bundles, for example, require changes in bedside clinician behavior; the health system dedication; and development of clinical resources to prioritize skin care, particularly for complex patients who are difficult to turn. However, steep decreases in administrative data could be explained by systematic changes in assessment and documentation of pressure ulcers, such as encouraging verification of pressure ulcer staging to avoid identifying wounds (such as skin tears or burns) as pressure ulcers and confirmation that a stage III is really not a stage II in response to the CMS payment changes. Although many pressure ulcers may indeed be preventable, the design and implementation of prevention programs is not simple, as demonstrated by evidence reviews providing recommendations for preventive strategies based on limited evidence and patient risk
factors that are often not easily modifiable during a brief hospitalization, such as chronic nutrition issues or impaired mobility.17,18

The AHRQ HAPU measure, PSI #3, excludes hospitalizations of fewer than five days; all cases with any diagnosis of a POA pressure ulcer; some high-risk patients, such as all with paraplegia or quadriplegia diagnoses; and transfers from skilled nursing homes and hospitals if the transfer status was correctly noted in the administrative data (as opposed to listing “emergency room” if the patient was not a direct admission to the inpatient floor from the nursing home).19 Yet even these exclusions and the additional risk-adjustment procedures used for generating PSI #3 do not easily explain the steep decrease in the administrative data.

Other changes have occurred in the past decade that could affect documentation of HAPU in administrative data beyond the payment changes or the five interventions studied. One tool has been the development of visual educational resources (such as freely accessible online modules) for distinguishing pressure ulcers (by stage) from other wounds.20 There has also been a rapid spread of electronic health record systems with reminder prompts to standardize skin assessments. Implementation science involving nursing-sensitive indicators such as pressure ulcers has also encouraged use of team-based approaches to facilitate recognition of patients at risk of pressure ulcers and the prompt, routine delivery of skin care by bedside or wound care nurses, particularly for hospitals meeting Magnet Recognition standards.21 In addition to Medicare policies affecting payment and reporting, state-based mandates for HAPU reporting have also steadily increased in the past decade.

In summary, despite the facilitated generation of HAPU incident rates from administrative data that are encouraging because of the reported sustained decreases, administrative data do not meet the strict criteria for a true surveillance dataset of HAPUs and other HACs. Consequently, decreasing incidence rates of HAPUs and other HACs in administrative data after implementation of financial and public reporting disincentives will remain suspect as confirmatory evidence for the beneficial impact of payment reforms until more rigorous surveillance methods using trained examiners or comprehensive chart review are applied to validate the administrative data for this purpose—with particular attention to procedures to minimize underreporting of pressure ulcers.

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References