Furthermore, you have to consider that the surgeon did not take the patient to the operating room based on the CDI specialist’s query about the patient’s renal status. Additionally, the MCC that ultimately drove the reimbursement level was provided independently by the cardiology consultant, with no prompting from the CDI staff.

Would it surprise the CDI director, then, to learn that the true financial impact of the CDI specialist in this instance was $0? The documentation of the chronic kidney disease is, of course, important to the completeness and accuracy of the record on this patient, and SOI or ROM may be affected. But claiming any direct financial benefit from the CDI specialist’s involvement with this patient’s documentation is not warranted.

Baseline case-mix index

So, the baseline DRG is the DRG that would have been coded and billed without the intervention of the CDI specialist. The average weights of the actual baseline DRGs can be used to compute a case-mix index (CMI) in an analogous fashion to using the average weights of the billed DRGs, even though most hospitals don’t use this metric.

In the sample chart on p. 14, the baseline CMI is shown with the red line, and the billed CMI, the one traditionally reported, is shown with the blue line. In the early stages of this CDI program, the difference between the two values appears to be due to the impact of the CDI staff, as one might expect. But notice that the baseline CMI increases over time—this implies that the physicians have learned to document better. While the gap between the two lines narrows over time, the benefits seen in the billed CMI continue to be positive. A rise in the baseline CMI reflects the “training effect” of having a CDI program, which cannot be discounted.

Conclusion

Selection of the baseline DRG should be done carefully, honestly, and precisely. Make sure that you have control over the designation of the baseline DRG, or at least fully understand how it was defined if you are using a software program or consultant.

Doing so will help you ensure that your reports are not artificially inflated by incorrect metrics or spreadsheet calculations. Similarly, comparing the baseline CMI to the billed CMI can provide valuable insights into potential training effects on the physicians, and can help to identify opportunities for further education.

If you don’t understand this component, you won’t have a firm grasp of your program’s value at its most basic level. ✎

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Radiology findings can help support your physician queries by Lynne Spryszak, RN, CCDS, CPC-A

A patient’s medical record contains a wealth of information about his or her hospital encounter, including diagnoses, treatments, operative reports, and ancillary notes. Unfortunately, much of the detailed information found in a patient record is not codeable—in other words, it is not information that may be used for diagnosis code assignment. Coders may only use documentation contained in select portions of the record—that which is provided by “hands-on” providers (i.e., those providers legally accountable for establishing a diagnosis).

Radiology reports, such as CT and MRI scans, x-rays, and ultrasounds, frequently contain detailed information that can lead to more specific code assignment. Coding Clinic advice supports the use of radiology findings to obtain additional information regarding the coding of the specific site of fractures. See the following references for more information: Coding Clinic, First Quarter 1999, p. 5 (fracture site specified in radiology report), and Coding Clinic, Second Quarter 2002, p. 3 (ED coding using the
radiological findings). Note, however, that this guidance does not pertain to assigning diagnosis codes for conditions that the treating provider does not specifically identify or document.

**Clues in the documentation**

Specific information often found in CT or MRI scans can assist with diagnoses of cerebral edema or compression of the brain. These two diagnoses, when reported, add severity to a record because they are considered MCCs in the MS-DRG system. They also represent increased ROM in other classification systems. These two diagnoses frequently trigger the following interventions:

» Intracranial pressure (ICP) monitoring
» Surgical intervention (e.g., evacuation of an intracranial hemorrhage or insertion of a drainage device)
» Insertion of a shunt and/or treatment with medications to reduce intracerebral pressure

According to St. John Ambulance, brain (or cerebral) compression:

...Occurs when there is a build-up of pressure on the brain. This pressure may be due to one of several different causes, such as an accumulation of blood within the skull or swelling of injured brain tissues. Cerebral compression is usually caused by a head injury. However, it can also be due to other causes, such as stroke, infection, or a brain tumor. The condition may develop immediately after a head injury, or it may appear a few hours or even days later. For this reason, you should always try to find out whether the casualty has a recent history of a head injury.

Compression of the brain and cerebral edema are both serious conditions that can lead to herniation of the brain, brain cell death, and long-term deficits. These conditions often go undocumented because providers assume that a diagnosis of cerebral hemorrhage, brain tumor, or stroke includes anything related to the focal diagnosis. Providers also assume that because these conditions may be evident from findings summarized in the CT and/or MRI scan, there is no need to document these conditions in their own notes.

This is where a thorough review of radiology reports provides the clinical information to support a provider query for appropriate additional secondary diagnoses such as cerebral compression or cerebral edema. Not every patient with a cerebral hemorrhage or stroke has cerebral edema or compression of the brain, which is why it is appropriate to report these conditions when present.

**Queries for secondary conditions**

Review the Uniform Hospital Data Discharge Set guidelines for reporting secondary diagnoses before querying the provider. For example, before submitting a query, determine whether the condition is the subject of clinical evaluation, diagnostic testing, therapeutic treatment, or increased nursing care, or whether it caused an increased length of stay (LOS). If so, then it would be appropriate to query for the potential secondary corresponding diagnosis.

When reviewing radiology reports, take the following approach:

» Look for terms such as “midline shift,” “compression of the fourth ventricle,” or “space occupying lesion” (often used to describe intracranial tumors).

» Look for any surgical treatments provided, such as ICP, decompressive craniectomy, lumbar puncture, or insertion of a subdural evacuating port system drain (interventions designed to reduce intracranial pressure). Physicians perform some interventions at the bedside and often do not document them. These may be overlooked if a thorough review of the progress notes is not performed.

» Review the medication record for administration of IV steroids, IV mannitol or Osmittrol®, diuretics, or hypertonic saline designed to reduce edema. Patients with complex brain injuries may be followed by a neurologist, neurosurgeon, intensivist, or all three. Their documentation may include specific diagnoses, but coders should not assume that if the condition is not listed in the physicians’ notes, it is insignificant.

» Assess for additional resources such as surgical intervention or physical/occupational/speech therapy. Coders should review these notes for evidence of neurologic deficits that provide additional support for reporting higher-acuity diagnoses.

**Sample scenario illustrates query opportunity**

Consider a patient who is on your census in the medical ICU of a large tertiary center. The admitting or principal diagnosis is “non-traumatic intracerebral hemorrhage.” The
patient’s wife found him unresponsive on the living room floor on April 6 and called 911. The patient has a history of hypertension, and his wife states that the patient “always forgot to take his medications.” A CT scan and MRI confirm an intracerebral hemorrhage with evidence of a midline shift.

Upon arrival to the emergency department (ED), the Glasgow coma score total was 8 (eye 2, verbal 2, motor 4). One day later, the score is 3 (eye 1, verbal 1, motor 1). The patient requires emergency surgery for evacuation of the intracerebral bleed.

When deciding to query for the additional diagnosis of “compression of brain,” consider that the size of the skull is finite—it cannot expand to allow the uninjured brain tissue to “get out of the way” of the hemorrhage, which is increasingly taking up space. As the hemorrhage progresses, brain tissue is compressed against the rigid skull because it has nowhere else to go.

Documentation of “midline shift” indicates the brain tissue is shifting across the hemispheric midline. Not every patient with a subarachnoid hemorrhage needs surgical intervention. Physicians may monitor and treat small hemorrhages only with medication, so a diagnosis is needed to explain why this patient required additional resources.

Currently there is only one ICD-9-CM code available for reporting non-traumatic intracerebral hemorrhages: 431. This code includes intracerebral hemorrhages by general location (e.g., cerebellar, cerebral, cortical, and subcortical) but does not include or incorporate additional conditions, such as cerebral compression or cerebral edema.

Traumatic cerebral hemorrhage, ICD-9-CM code set 853.xx (other and unspecified intracranial hemorrhage following injury), does include the sub-term “cerebral compression due to injury.” Coders should also report a code for the specific injury when possible. This represents a query opportunity. The codes from the 853.xx category also include fifth-digit specificity as to reporting loss of consciousness.

**Sample query form**

Consider the following query example for additional diagnoses for the scenario described above (please refer to your facility’s specific query policies regarding compliant query verbiage):

Dear Dr. __________:

A review of the documentation in the record shows that the patient was admitted on 4/6/11 with a Glasgow coma score of 8 with a repeat Glasgow score of 3 on 4/7/11, an admitting diagnosis of “intracerebral hemorrhage” (H/P of 4/6/11), as well as being described as “unresponsive” (progress note of 4/7/11). Note the findings of the CT and MRI (4/6/11) scans, and subsequent physician documentation of “intracerebral hemorrhage with considerable midline shift at the level of the lateral ventricles.” Note orders for IV steroids and emergent surgical evacuation of the hemorrhage to “reduce intracranial pressure” (progress note of 4/7/11).

If one (or more) of the following accurately describe any associated additional diagnoses for this patient, please provide this documentation in your progress notes and discharge summary:

- No additional diagnoses indicated
- Cerebral compression/compression of brain
- Cerebral edema
- Coma
- Other condition (please indicate): ____________________
- Clinically unable to determine

A final word of caution: The proliferation of external auditors (e.g., Recovery Audit Contractors) to identify fraudulent practices in the Medicare and Medicaid systems has led to increased scrutiny of diagnoses that, when reported, result in additional revenue. When querying a provider for an additional diagnosis, such as cerebral edema or compression of brain, make sure that your query incorporates the clinical findings from the radiology report and the treatments rendered, and that the documentation remains consistent throughout the record, including the discharge summary.

Editor’s Note: Spryszak is CDI education director for HCPro, Inc., in Danvers, MA. Her areas of expertise include clinical documentation and coding compliance, quality improvement, physician education, leadership, and program development. E-mail your questions to her at lspryszak@hcpro.com.

In addition to open registration classes, ACDIS also offers the Clinical Documentation Improvement Boot Camp as an on-site program. To explore the possibility of bringing Lynne Spryszak to your facility for a CDI Boot Camp or other training program, call 800/780-0584 or e-mail bootcamps@hcpro.com.