Reviewing the Details of Coding Septicemia

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In March 1999, the Office of Inspector General (OIG) released an executive summary on "Medicare Payments for Septicemia." The Health Care Financing Administration (HCFA) contracted with two clinical data abstraction centers to validate a national random sample of claims from all Medicare inpatient hospital discharges. The results of their 1996 validation report demonstrated that approximately 13 percent of the sample DRG 416 (septicemia) discharges should have been coded to a lower-weighted DRG. HCFA estimated the total overpayment attributable to incorrect DRG 416 classification was approximately $49,000,000.

The OIG then conducted a DRG 416 validation study on a sample of 2,622 Medicare inpatient hospital discharges from 1996. The results of the study demonstrated that approximately 20 percent (17 discharges) of the sample discharges were improperly coded. Nationally, DRG 416 discharges increased from 167,900 in 1993 to 220,441 in 1996. Previous DRG validation reviews demonstrated that a substantial number of improperly coded DRG 416 discharges should have been coded to DRG 320 (Kidney and Urinary Tract Infections).

Currently, DRG 416 includes septicemia codes such as pneumococcal septicemia (038.2) or streptococcal septicemia (038.0). There are actually 24 ICD-9-CM principal diagnosis codes that can lead to DRG 416. The OIG study showed that the 17 erroneously coded discharges should have been coded to 12 other DRGs. The largest percentage of errors occurred in three other DRGs: 24 percent should have been coded to DRG 320 (Kidney and Urinary Tract Infections); 12 percent should have been coded to DRG 089 (Simple Pneumonia & Pleurisy); and another 12 percent should have been coded to DRG 182 (Esophagitis, Gastroenteritis, and Misc. Digestive Disorders).

As a result of this study, the OIG recommended that HCFA institute a system to identify hospitals with atypically high billings for DRGs that have a high potential for being upcoded. HCFA concurred with the OIG's recommendation. A February 16, 1999, letter from Nancy-Ann MinDeparle, HCFA administrator, to June Gibbs Brown, OIG Inspector General, states that "under the Peer Review Organization (PRO) contracts that will take effect between August 1999 and February 2000, PROs will conduct a Payment Error Prevention Program (PEPP) for inpatient hospital care. This will lead PROs to identify in their state DRGs (such as septicemia) where education of the provider community is warranted."

Causes and Diagnosis of Septicemia

Septicemia is an acute invasion of the bloodstream by microorganisms. It can be a serious, rapidly progressive, life-threatening infection that may arise due to localized infections of the respiratory, gastrointestinal tract, genitourinary system, or from the skin. It can also coincide with or be preceded by infections like osteomyelitis, meningitis, or urinary dysfunction. Patients with underlying diseases such as diabetes, cirrhosis, alcoholism, or cancer may be at a higher risk for septicemia. Symptoms include fever, chills, tachycardia, tachypnea, petechiae, decreased or no urine output, and altered mental state, such as lethargy, agitation, and irritability.

When associated with organisms like meningococci, septicemia can lead to septic shock, which usually includes a blood pressure less than 90 mm or a drop of 40 mm Hg from the baseline value. If the patient is in septic shock, they may also have organ dysfunction, hypothermia, hypoperfusion, hypotension, lactic acidosis, and/or respiratory distress syndrome. *Coding Clinic* 1Q 1988 states, "When the diagnosis of septicemia with shock or the diagnosis of general sepsis with septic shock is documented, code and list the septicemia first and report the septic shock code as a secondary condition."

Cultures may be taken from the blood, urine, or cerebrospinal fluid to assist in the diagnosis of septicemia. Gram-negative bacteria (*E. coli, Proteus, Pseudomonas,* and others) encompass approximately 60 to 70 percent of the positive cultures.

Gram-positive bacteria (*Staphylococci, Streptococci*) account for approximately 20 to 40 percent of the positive cultures with 2 to 3 percent due to fungi.

Coding Clinic 1Q 1988 states, "Although a patient may show clinical evidence of septicemia, the blood culture may be negative due to difficulty in culturing fastidious organisms from blood, growth inhibitory factors in the blood, or initiation of specific antibiotic therapy before laboratory test samples are taken. Negative or inconclusive blood cultures do not preclude a diagnosis of septicemia in patients with clinical evidence of the condition."

In addition, *Coding Clinic* 3Q 1988 states, "Frequently, the patient is suspected of having septicemia and is treated for such even though the blood cultures may not be supportive."

Septicemia Treatments

The treatment of septicemia and/or septic shock must be in a hospital setting, many times with an admission to an intensive care unit. IV fluid bolus is given to maintain the patient's blood pressure and keep urine output between 30 - 60 ml/hour in adults. Oxygen therapy is given with oxygen saturation >95 percent to maintain oxygen saturation. Antibiotics are given as soon as possible (preferably after cultures are obtained) to treat the infection. Many times, broad-spectrum antibiotics (effective against a wide range of organisms) are given prior to identifying the bacteria. Once the bacteria is identified, antibiotics specific to that organism are prescribed.

Physician Clarification Necessary

Do not confuse the term "bacteremia" with "septicemia." Bacteremia is the presence of viable bacteria in the blood that may be transient due to a trauma or may be persistent/recurrent due to an infection. Bacteremia denotes a laboratory finding. Septicemia denotes acute illness as described above. Undocumented bacteremias occur frequently and usually abate spontaneously. The code for bacteremia (790.7) contains an Excludes note to specifically exclude septicemia.

The term "urosepsis" is defined as a septic poisoning due to retention and absorption of urinary products in the tissues. The ICD-9-CM alphabetical index assigns the term "urosepsis" to code 599.0 (Urinary Tract Infection). If the term "urosepsis" is documented, the physician should be queried. *Coding Clinic* 1Q 1998 states, "the physician should be asked if the diagnosis of urosepsis is intended to mean (1) generalized sepsis (septicemia), code 038.9, or (2) urine contaminated by bacteria, 599.0." Only the physician can diagnose this condition.

Resources for Accuracy

Care should be taken in the assignment of septicemia. Review the documentation within the patient record as well as all of the *Coding Clinic* guidelines and the Uniform Hospital Discharge Data Set (UHDDS). The Guidelines for Selection of Principal Diagnosis are included in *Coding Clinic* 2Q 1990, which states, "the importance of consistent, complete documentation in the medical record cannot be overemphasized. Without such documentation, the application of all coding guidelines is a difficult, if not impossible, task."

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