The metabolic consequences of diabetes mellitus are directly responsible for many well recognized and chronic complications in several organ systems, such as retinopathy, neuropathy, and nephropathy. The precise documentation and code assignment of diabetes and its complications can have a profound impact on revenue and quality reporting for both clinicians and hospitals.

Last month’s column provided an overview, definitions, coding, and documentation of diabetes, its six types, and its acute complications. This column will address chronic diabetic complications, focusing on type 2 diabetes, with the understanding that the same principles apply to the other types.

ICD-10-CM recognizes several categories of chronic complications (see Table).

Diabetic nephropathy (E11.2), or glomerulosclerosis due to glomerular injury, commonly affects diabetic patients, leading to chronic kidney disease (CKD). Diabetes is the top cause of CKD and end-stage renal disease worldwide. The characteristic finding is albuminuria, defined as an albumin excretion rate of at least 30 mg/24 h or an albumin-to-creatinine ratio of at least 30 mg/g. Papillary (medullary) necrosis is another manifestation of diabetic nephropathy, but acute tubular necrosis is not caused by diabetes. The type of nephropathy (nearly always CKD) is coded with the E11.2 code. The stage of CKD is incorporated in the CKD codes (N18.1-N18.6).

Diabetic retinopathy (E11.3) is one of the most important causes of visual loss worldwide and includes microangiopathy, macular edema, hemorrhage from neovascularization, and retinal detachment. It has scores of codes identifying type, location, and severity. It may be classified as proliferative and nonproliferative. Diabetic glaucoma (E11.39) is caused by increased intraocular pressure resulting specifically from proliferative retinopathy. Diabetic cataract (E11.36) is primarily associated with type 2 diabetes.

Diabetic neuropathy (E11.4) includes mononeuropathy (peripheral or cranial), polyneuropathy, autonomic neuropathy, “unspecified neuropathy,” and diabetic amyotrophy. Peripheral polyneuropathy and autonomic neuropathies are probably the most common complication of diabetes, and conversely, diabetes is the most common cause of these neuropathies.

Diabetic circulatory disease (E11.5) includes peripheral vascular disease (PVD) and microangiopathy. PVD is a progressive atherosclerosis of lower-extremity arteries (generally not upper extremities), eventually progressing to distal tissue ischemia. Carotid, aortic, renal, mesenteric, and coronary arteries are central arteries, not peripheral. Microangiopathy represents toxic injury to vascular and capillary endothelium due to hyperglycemia.

Arthropathy (E11.6), primarily Charcot joint, is chronic, progressive joint destruction due to absent sensation leading to repetitive unrecognized joint injury and degeneration. It primarily affects the foot and ankle but is also seen in the shoulder. Other diabetic arthropathic conditions include carpal tunnel syndrome, trigger finger (stenosing tenosynovitis), Dupuytren’s contracture, adhesive capsulitis (frozen shoulder), and calcific periartritis/tendinitis.

Diabetic skin ulcers (E11.62) are nonpressure, nonischemic ulcers of the foot, usually related to sensory neuropathy. The foot is the most common location, although they also occur on the