Focus on
Stroke and Late Effects of Stroke
May is American Stroke Month

Quick Facts
- Stroke is the leading cause of adult long-term disability. Up to 30% of stroke survivors are permanently disabled.1
- The risk of stroke doubles each successive decade after age 55.2
- Over 70% of strokes are first events; therefore, early detection is critical to prevention of long-term consequences of cerebrovascular accidents.
- Long-term effects of stroke can be physical, psychological and emotional. The results of stroke vary depending on size and location of the lesion. Long-term dysfunction corresponds to areas in the brain that have been damaged.
- Direct costs for medical care and therapy for stroke victims to health plans are $28 billion per year.1

Modifiable Risk Factors for Ischemic Stroke3
- High blood pressure
- Atrial fibrillation
- High cholesterol
- Diabetes

Non-modifiable Risk Factors for Ischemic Stroke3
- Age
- Ethnic minority status
- Family history of stroke
- Gender (there is an increased risk for males)

Documentation Tips4
- Be sure to document when the event occurred and any deficits that are being treated.
- Document deficits after discharge from the initial acute episode (e.g., cerebrovascular accident [CVA] two years ago with residual hemiplegia).
- Continue to report deficit every year, as long as it persists.
- Specific diagnostic statements facilitate proper coding (e.g., CVA due to cerebral embolism with infarction, facial droop due to CVA six months ago).

Coding Highlights5
Codes from category 434, Occlusion of cerebral arteries, are used on the admission to the hospital for the acute event:

434.01 Cerebral thrombosis with cerebral infarction, 434.11 Cerebral embolism with cerebral infarction, 434.91 Cerebral artery occlusion, unspecified, with cerebral infarction. Codes from category 438, Late effects of cerebrovascular disease, are utilized to report residual deficits of stroke during office visits following the acute incident. A late effect is the residual condition that remains after recovery from the acute phase of the stroke. V12.54 reports personal history of: stroke and/or TIA when there are no residual deficits seen in the patient.

Family history of stroke is coded as V17.1. 436 Acute, but ill-defined, cerebrovascular disease should not be utilized for reporting a CVA.

Stroke Prevention
Primary prevention of ischemic stroke includes controlling hypertension, treating dyslipidemia, use of antithrombotic therapy in patients with atrial fibrillation and of antiplatelet therapy in patients with myocardial infarction and a diet rich in fruits and vegetables.6,7
Secondary prevention of ischemic stroke includes treatment of hypertension and hyperlipidemia, antithrombotic therapy for patients with atrial fibrillation, antiplatelet therapy and carotid endarterectomy in patients with severe carotid artery stenosis.5

Long Term Complications of Stroke
Physical problems: Long-term complications from stroke include: hemiplegia, numbness, pressure sores, incontinence, apraxia (inability to perform learned movements), vision loss, seizures and pain.
Psychological problems: These result from direct damage to emotional centers in the brain or from difficulty adapting to new limitations. Difficulties include anxiety, panic attacks, flat affect, mania, apathy and psychosis.

Up to 50% of stroke survivors suffer post stroke depression, which is characterized by lethargy, irritability, sleep disturbances, lowered self esteem and withdrawal. Depression can reduce motivation and worsen outcome, but can be treated with antidepressants. Labile emotions occur in 20% of stroke patients.

Cognitive deficits: Stroke leads to perceptual disorders, speech problems such as aphasia, dementia and problems with attention and memory.