Additional Documentation
V-1

Risk stratification based on the American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR) can be found in the Glossary.
Cardiac rehabilitation services are contraindicated in patients with the following conditions:

- A recent significant change in the resting ECG suggesting significant ischemia, recent MI (within 2 days), or other acute cardiac event;
- Severe residual angina;
- Uncompensated heart failure;
- Uncontrolled arrhythmias;
- Symptomatic severe aortic stenosis;
- Severe ischemia, LV dysfunction, or arrhythmia during exercise testing;
- Poorly controlled hypertension;
- Acute pulmonary embolism or pulmonary infarction;
- Acute myocarditis or pericarditis;
- Suspected or known dissecting aneurysm;
- Acute systemic infection, accompanied by fever, body aches, or swollen lymph glands;
- Hypertensive or any hypotensive systolic blood pressure response to exercise.

Relative contraindications to exercise include:

- Left main coronary stenosis;
- Moderate stenotic valvular heart disease;
- Electrolyte abnormalities (e.g., hypokalemia, hypomagnesemia);
- Severe arterial hypertension (i.e., systolic BP If >200mm Hg and/or diastolic BP of >110 mm Hg) at rest;
- Tachydysrhythmia or bradydysrhythmia;
- Hypertrophic cardiomyopathy and other forms of outflow tract obstruction;
- Neuromuscular, musculoskeletal, or rheumatoid disorders that are exacerbated by exercise;
- High-degree atrioventricular block;
- Ventricular aneurysm;
- Uncontrolled metabolic disease (e.g., diabetes, thyrotoxicosis, or myxedema);
- Chronic infectious disease (e.g., mononucleosis, hepatitis, AIDS);
- Mental or physical impairment leading to inability to exercise adequately.

The patient's risk for another coronary event determines the status of the individual patient as a high-, moderate-, or low-risk patient. Use of early (pre-discharge) exercise testing, with or without radionuclide studies, provides the ability to determine the probability of a proximate ischemic event. Risk stratification testing benefits all patients regardless of their level of risk.
Initially, a comprehensive evaluation may be performed to evaluate the patient and determine an appropriate exercise program.

In addition to a medical examination, an ECG (EKG) stress test (treadmill or bicycle ergometer) may be performed to: evaluate chest pain (especially atypical chest pain); develop exercise prescriptions for patients with known cardiac disease; or evaluate the pre- and postoperative status of patients undergoing CABG, heart valve surgery, PTCA, or heart transplantation (including patients with chronic heart disease awaiting transplantation). Payment may be made for an initial ECG stress test and one additional ECG stress test which may be performed 3 months later, usually at the completion of the program.

Because individual cardiac rehabilitation patients achieve the goals of exercise training at somewhat different rates, a uniform endpoint for program duration is not possible.

In addition to typical program duration, an endpoint for cardiac rehabilitation services may also be determined using the patient's work capacity as measured by metabolic equivalents of task (MET). A MET is the measurement of the work required from the cardiovascular and pulmonary systems by a given activity. One MET equals approximately 3.5 ml of oxygen consumption per kilogram of body weight per minute.

Depending on patient variables such as age, sex, cardiac history, the existence of other complicating medical conditions, etc., work capacity usually levels out at a maximal level of 5 to 8 METs for most cardiac rehabilitation patients. Reasonable endpoint criteria for medically supervised cardiac rehabilitation programs can include the ability of the patient to exercise at a level of 8 or more METs without cardiac symptoms and the acquisition of the skills necessary for the self-monitoring of an unsupervised exercise program.

Since many patients with cardiac disease will not be capable of achieving this level of work capacity, the absence of improvement in capacity after 3 serial exercise tests can be used as an alternative endpoint indicator.

Once a patient's maximal work capacity has leveled out, ongoing exercise is considered maintenance.

Additional cardiac rehabilitation services are eligible based on the clinical criteria defined in this policy when the individual has a repeat occurrence of the covered conditions, e.g., another cardiovascular surgery, a new MI, etc.