

# CAD - Coronary Artery Disease

## CAD-AP ANATOMY AND PHYSIOLOGY

**OUTCOME:** The patient/family will understand anatomy and physiology as it relates to coronary artery disease.

### STANDARDS:

1. Explain the normal anatomy and physiology of the coronary artery system.
2. Discuss the changes to anatomy and physiology as a result of coronary artery disease.
3. Discuss the impact of these changes on the patient's health or well-being.

## CAD-ADV ADVANCE DIRECTIVE

**OUTCOME:** The patient/family/caregiver will understand the process of developing an advance directive and its role in guiding medical care and decision making to best serve the patient's care preferences.

### STANDARDS:

1. Explain that many persons are not able to make their own decisions when ill. The advance directive, or other statement of care preferences, allows patients to express their preferences and guide treatment decisions in that setting.
2. Explain that this statement of preferences is only used to guide decision making if the patient is unable to provide guidance at the time that decisions need to be made.
3. Explain that Advance Directives or other statements of care preferences can help families and caregivers who may need to be decision-makers for the patient to understand the patient's preferences for care.
4. Review the option of Advanced Directives or other statements of care preferences with the patient and the patient's family. Explain treatment options and answer questions in a manner the patient/family will understand.
5. Refer as appropriate to those who can assist the patient in further clarifying healthcare decision-making authority (e.g., Social Services, Clergy, Lawyer) by defining a healthcare proxy, writing a living will, or further discussing the preferences for care.
6. **Refer to ADV.**

## **CAD-C      COMPLICATIONS**

**OUTCOME:** The patient/family will understand how to prevent complications of coronary artery disease.

### **STANDARDS:**

1. Discuss the common and important complications of coronary artery disease, e.g., MI, angina, stroke, etc.
2. Discuss the importance of following a treatment plan to include diet, exercise, and medication therapy to prevent complications.
3. Emphasize immediate medical intervention for signs and symptoms of complications, e.g., chest pain, nausea, loss of consciousness, jaw/arm pain, SOB, diaphoresis.

## **CAD-CM      CASE MANAGEMENT**

**OUTCOME:** The patient/family/caregiver will understand the importance of integrated case management in achieving physical and behavioral health.

### **STANDARDS:**

1. Discuss roles and responsibilities of each member of the care team including the patient, family/caregiver, and providers in the case management plan.
2. Explain the coordination and integration of resources and services in developing and implementing the case management plan.
3. Explain the need to obtain the appropriate releases of information necessary to support integrated case management and to maintain patient privacy and confidentiality. **Refer to AF-CON.**

## **CAD-CUL      CULTURAL/SPIRITUAL ASPECTS OF HEALTH**

**OUTCOME:** The patient/family will understand the impact and influences that cultural and spiritual traditions, practices, and beliefs have on health and wellness.

### **STANDARDS:**

1. Discuss the potential role of cultural/spiritual traditions, practices and beliefs in achieving and maintaining health and wellness. Refer to clergy services, traditional healers, or other culturally appropriate resources.
2. Explain that traditional medicines/treatments should be reviewed with the healthcare provider to determine if there are positive or detrimental interactions with prescribed treatment. Explain that the medical treatment plan must be followed as prescribed to be effective.

## **CAD-DP      DISEASE PROCESS**

**OUTCOME:** The patient will understand coronary artery disease and its symptoms.

### **STANDARDS:**

1. Explain that coronary artery disease is the result of the buildup of plaque in the interior wall of the coronary artery.
2. Review the factors related to the development of coronary artery disease: uncontrolled hypertension, elevated cholesterol, obesity, uncontrolled diabetes, sedentary lifestyle, increasing age, family history of vascular disease, and male gender. Emphasize that a personal history of any vascular disease greatly increases the risk of CAD.
3. Review the signs of coronary artery disease - substernal chest pain radiating to the jaw(s), neck, throat, arm(s), shoulder(s), or back. Nausea, weakness, shortness of breath, or diaphoresis (sweating) may accompany the pain.
4. Explain that chest pain is the discomfort felt when the heart muscle is deprived of oxygen.
5. Differentiate between angina (the temporary loss of oxygen to the heart muscle) and infarction (a permanent loss of oxygen to the heart muscle resulting in permanent damage and loss of function). Emphasize that angina is an important warning sign which should prompt immediate medical evaluation.
6. Explain that sometimes only a physician, through test interpretation, may be able to differentiate between angina and myocardial infarction.

## **CAD-EQ      EQUIPMENT**

**OUTCOME:** The patient/family will understand and demonstrate (when appropriate) the proper use and care of equipment.

### **STANDARDS:**

1. Discuss the indications for and benefits of the prescribed medical equipment.
2. Discuss types and features of the medical equipment as appropriate. Discuss and/or demonstrate proper use and care of medical equipment. Participate in a return demonstration by the patient/family.
3. Discuss signs of equipment malfunction and proper action in case of malfunction as appropriate and emphasize safe use of equipment.
4. Discuss proper disposal of associated medical supplies.
5. For inpatients, explain that the various alarms are to alert the medical personnel of the patient's status and/or the function of the equipment. Emphasize the importance of not tampering with any medical device.

## **CAD-EX      EXERCISE**

**OUTCOME:** The patient/family will understand the role of increased physical activity in this patient's disease process and will make a plan to increase regular activity by an agreed-upon amount.

### **STANDARDS:**

1. Discuss medical clearance issues for physical activity.
2. Discuss the benefits of any exercise, such as improvement in well being, stress reduction, sleep, bowel regulation, and self image.
3. Assist the patient in developing a personal exercise plan. Explain that exercise should be consistent and of sufficient duration to obtain the desired outcome.
4. Encourage the patient to increase the intensity of the activity as the patient becomes more fit.
5. Discuss obstacles to a personal exercise plan and solutions to those obstacles.
6. Refer to community resources as appropriate.

## **CAD-FU      FOLLOW-UP**

**OUTCOME:** The patient/family will understand the importance of follow-up in the treatment of coronary artery disease.

### **STANDARDS:**

1. Discuss the individual's responsibility in the management of coronary artery disease.
2. Review treatment plan with the patient, emphasizing the need for keeping appointments, fully participating with medication therapy, adhering to dietary modifications, and maintaining an appropriate activity/rest balance.
3. Review the symptoms that should be reported and maintained (symptoms more frequent or occurring during rest, symptoms lasting longer, using prn medications more frequently, etc.).
4. Instruct the patient that if chest pain is not relieved after taking three doses of nitroglycerine 3–5 minutes apart or as directed by the patient's physician, the patient should go immediately to the nearest emergency care facility. Recommend the use of the local emergency transport system.

## **CAD-L      LITERATURE**

**OUTCOME:** The patient/family will receive literature about coronary artery disease.

### **STANDARDS:**

1. Provide the patient/family with literature on coronary artery disease.

2. Discuss the content of the literature.

## **CAD-LA      LIFESTYLE ADAPTATIONS**

**OUTCOME:** The patient/family will understand the lifestyle adaptations necessary to maintain optimal health.

### **STANDARDS:**

1. Emphasize that the most important component in the prevention and treatment of coronary artery disease is the patient's adaptation to a healthier, lower risk lifestyle.
2. Discuss lifestyle adaptations that may reduce further risk of myocardial infarction and improve the quality of life (cease use of tobacco products, limit stress, control hypertension and elevated cholesterol through medications, diet and exercise, lose weight as indicated, control diabetes, and increase activity as prescribed by the physician).

## **CAD-M      MEDICATIONS**

**OUTCOME:** The patient/family will understand the purpose, proper use, and expected outcomes of prescribed drug therapy.

### **STANDARDS:**

1. Describe the name, strength, purpose, dosing directions, and storage of the medication.
2. Discuss the risks, benefits and common or important side effects of the medication and follow up as appropriate.
3. Discuss any significant drug/drug, drug/food, and alcohol interactions, as appropriate.
4. Discuss the importance of keeping a list of all current prescriptions and over-the-counter medicines, vitamins, herbs, traditional remedies, and supplements. Encourage the patient to bring this list and pill bottles to appointments for medication reconciliation.

## **CAD-MNT      MEDICAL NUTRITION THERAPY**

**OUTCOME:** The patient/family will understand the specific nutritional intervention(s) needed for treatment or management of coronary artery disease.

### **STANDARDS:**

1. Explain that Medical Nutrition Therapy (MNT) is a systematic nutrition care process provided by a Registered Dietitian (RD) that consists of the following:
  - a. Assessment of the nutrition related condition.

- b. Identification of the patient's nutritional problem.
  - c. Identification of a specific nutrition intervention therapy plan.
  - d. Evaluation of the patient's nutritional care outcomes.
  - e. Reassessment as needed.
2. Review the basic nutrition recommendations for the treatment plan.
  3. Discuss the benefits of nutrition and exercise to health and well-being.
  4. Assist the patient/family in developing an appropriate nutrition care plan.
  5. Refer to other providers or community resources as needed.

## **CAD-N      NUTRITION**

**OUTCOME:** The patient/family will understand the role of nutrition and coronary artery disease.

### **STANDARDS:**

1. Discuss the roles of heredity, exercise, and lifestyle habits including the relationship between diet and coronary artery disease, hypertension, elevated cholesterol, and obesity.
2. Explain which foods are sources of saturated fats and trans fatty acids. Encourage the reading of food labels: "free, low, reduced" fat and cholesterol, etc.
3. Discuss the benefits of omega-3 fatty acids such as tuna, salmon, herring, mackerel and the water-soluble fibers found in legumes, fruits, and bran.
4. Discuss an appropriate low fat diet and exercise plan to achieve optimal weight and improve or correct lipids. Refer to registered dietitian for MNT.
5. **Refer to LIP.**

## **CAD-P      PREVENTION**

**OUTCOME:** The patient/family will understand ways to prevent CAD.

### **STANDARDS:**

1. Discuss that prevention of coronary artery disease is far better than controlling the disease after it has developed.
2. Explain that consuming a diet low in fat, and controlling weight, lipid levels and blood pressure will help to prevent CAD.
3. Discuss that persons with uncontrolled diabetes, uncontrolled hypertension, and/or uncontrolled dyslipidemia are more likely to develop CAD. Stress the importance of controlling these disease processes. **Refer to DM, HTN, LIP, OBS.**

## **CAD-PM PAIN MANAGEMENT**

**OUTCOME:** The patient/family will understand the plan for pain management.

### **STANDARDS:**

1. Explain that chest pain unrelieved by the prescribed regimen should be considered an emergency and prompt immediate medical evaluation.
2. Explain that pain management is specific to the disease process of this particular diagnosis and patient and may be multifaceted. **Refer to PM.**
3. Explain that short-term use of narcotics may be helpful in pain management as appropriate.
4. Explain that other medications may be helpful to control the symptoms of pain.
5. Discuss non-pharmacologic measures that may be helpful with pain control.

## **CAD-PRO PROCEDURES**

**OUTCOME:** The patient/family will understand the proposed procedure(s), as well as the risks, benefits, alternatives to the proposed procedure(s) and associated factors affecting the patient.

### **STANDARDS:**

1. Explain the specific procedure(s) to be performed, including the risks and benefits of performing the procedure and the adverse events that might result from refusal of the procedure.
2. Discuss alternatives to the proposed procedure(s), including expectant management, as appropriate.
3. Discuss the expected patient/family involvement in the care required following the proposed procedure(s).

## **CAD-SM STRESS MANAGEMENT**

**OUTCOME:** The patient will understand the role of stress management in coronary artery disease.

### **STANDARDS:**

1. Explain that uncontrolled stress can increase the severity of coronary artery disease.
2. Explain that uncontrolled stress can interfere with the treatment of coronary artery disease.
3. Discuss that stress may exacerbate adverse health behaviors such as increased tobacco, alcohol or other substance use as well as overeating, all which can increase the risk of morbidity and mortality from coronary artery disease.

4. Explain that effective stress management may help reduce the severity of coronary artery disease, as well as, help improve the health and well-being of the patient.
5. Discuss various stress management strategies which may help maintain a healthy lifestyle. Examples may include:
  - a. Becoming aware of your own reactions to stress
  - b. Recognizing and accepting your limits
  - c. Talking with people you trust about your worries or problems
  - d. Setting realistic goals
  - e. Getting enough sleep
  - f. Maintaining a healthy diet
  - g. Exercising regularly
  - h. Taking vacations
  - i. Practicing meditation, self-hypnosis, and positive imagery
  - j. Practicing physical relaxation methods such as deep breathing or progressive muscular relaxation
  - k. Participating in spiritual or cultural activities
6. Provide referrals as appropriate.

## **CAD-TE TESTS**

**OUTCOME:** The patient/family will understand the test(s) to be performed, the potential risks, the expected benefits, and the risks of non-testing.

### **STANDARDS:**

1. Explain test(s) that have been ordered (explain as appropriate):
  - a. method of testing
  - b. necessity, benefits, and risks of test(s) to be performed
  - c. any potential risk of refusal of recommended test(s)
  - d. any advance preparation and instructions required for the test(s)
  - e. how the results will be used for future medical decision-making
  - f. how to obtain the results of the test
2. Explain test results:
  - a. meaning of the test results
  - b. follow-up tests may be ordered based on the results
  - c. how results will impact or effect the treatment plan

- d. recommendations based on the test results

**CAD-TO TOBACCO (SMOKING)**

**OUTCOME:** The patient/family will understand the dangers of smoking.

**STANDARDS:**

1. Explain the increased risk of complications and chronic lung disease in the patient with coronary artery disease when exposed to cigarette smoke.
2. Encourage smoking cessation. If the patient is unwilling to stop smoking, emphasize the importance of cutting back on the number of cigarettes smoked in an effort to quit. **Refer to TO.**

**CAD-TX TREATMENT**

**OUTCOME:** The patient/family will understand the possible treatments that might be performed based on the test results.

**STANDARDS:**

1. List the possible procedures that might be utilized to treat the coronary artery blockage, e.g., angioplasty, coronary stent, coronary artery bypass.
2. Briefly explain each of the possible treatments.
3. Explain that the patient and medical team will make the treatment decision after reviewing the results of diagnostic tests.