

**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER  
OUTPATIENT CARDIAC REHABILITATION POLICY AND PROCEDURE**



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*Banyford 8/2/22*

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**MISSION:**

The mission of Cardiac Rehabilitation is to provide a comprehensive quality of care approach for individuals (regardless of race, color, religion or creed) for healthcare services administered to inpatients and outpatients with cardiovascular disease.

**I. GOALS:**

- A. To provide quality inpatient and outpatient care to patients regardless of race, color, religion or creed.
- B. To coordinate exercise programs and education/counseling to facilitate efficient, cost effective care.
- C. To develop and implement individual treatment plans designed to meet patient and therapeutic goals.
- D. To reduce risk factors, increase work capacity and earlier return to work or independent living for
- E. cardiac rehabilitation patients.
- F. To provide patient and family education, to include lifestyle modification programs, so that the patient may reach optional levels of physiological, psychological, vocational and emotional functional capacity.
- G. To acknowledge individual expertise and achievement while fostering a team approach in planning and decision-making processes as it relates to patient care and the organizational structure of the facility.
- H. To collaborate with multiple disciplines to develop and implement a comprehensive care plan.
- I. To evaluate the effects of care through existing performance improvement activities.

**I. Eligible patients for cardiac rehabilitation:**

- A. An acute myocardial infarction within the preceding 12 months
- B. A coronary artery bypass surgery
- C. Current stable angina pectoris
- D. Congestive heart failure
- E. Heart valve repair or replacement
- F. Percutaneous transluminal coronary angioplasty or coronary stenting
- G. A heart or heart-lung transplant

**II. Clinical contraindications to cardiac rehabilitation exercise training:**

- A. Unstable angina
- B. Resting SBP >200mmHg or resting DBP >110mmHg should be evaluated on a case-by-case basis
- C. Orthostatic BP drop of > 20mmHg, with symptoms
- D. Critical aortic stenosis (peak systolic pressure gradient > 50mmHg with aortic valve orifice area <0.75 cm<sup>2</sup> in average-size adult)
- E. Acute systemic illness or fever
- F. Uncontrolled atrial or ventricular arrhythmias
- G. Uncontrolled sinus tachycardia (> 120 beats/min)
- H. Uncompensated CHF
- I. Third degree AV block (without pacemaker)
- J. Active pericarditis or myocarditis
- K. Recent embolism
- L. Thrombophlebitis
- M. Uncontrolled diabetes (resting blood glucose > 15 – 20 mmol/L)
- N. Severe orthopedic problems that would prohibit exercise

- O. Other metabolic problems, such as acute thyroiditis, hypo- or hyperkalemia, hypovolemia, etc.

### **III Patient Evaluation and Documentation prior initiating cardiac rehabilitation program**

#### **A. Medical Management Evaluation**

1. Obtain a written signed physician referral to the program (Appendix A).
2. Obtain a signed informed consent form. (Appendix B).
3. Obtain current medical history-medical and surgical profile, including complications, comorbidities, and other pertinent medical history.
4. Perform a physical examination: cardiopulmonary systems assessment and musculoskeletal assessment.
5. Current medications, including dose and frequency
6. Identify any cardiac symptoms of chest discomfort, dyspnea, dizziness, arm/neck/shoulder pain including type, frequency, duration and cause of symptoms.
7. Cardiovascular disease risk factor profile
8. Resting 12 lead ECG
9. Assess left ventricular function as measured by echocardiogram, recent cardiac catheterization or nuclear imaging study

#### **B. Nutritional Counseling Evaluation**

1. Obtain estimates of total daily caloric intake and dietary content of saturated fat, trans fat, cholesterol, sodium, and nutrients.
2. Assess eating habits
3. Determine target areas for nutrition intervention

#### **C. Weight Management Evaluation**

1. Measure weight, height, and waist circumference.
2. Calculate body mass index (BMI).

#### **D. Blood Pressure Management Evaluation**

1. Measure seated resting blood pressure on  $\geq 2$  visits.
2. Measure blood pressure in both arms at program entry.
3. To rule out orthostatic hypotension, measure lying and standing blood pressure at program entry and after adjustments in antihypertensive drug therapy.
4. Assess current treatment and compliance.
5. Assess use of nonprescription drugs that may adversely affect blood pressure.

#### **E. Lipid Management Evaluation**

1. Obtain fasting measures of total cholesterol, high-density lipoprotein, low-density lipoprotein, and triglycerides. In those patients with abnormal levels, obtain a detailed history to determine whether diet, drug, and/or other conditions that may affect lipid levels can be altered.
2. Assess current treatment and compliance.
3. Repeat lipid profiles 2 months after initiation or change in lipid-lowering medications.
4. Assess creatine kinase levels and liver function in patients taking lipid-lowering medications

#### **F. Diabetes Management Evaluation**

1. If a patient is known to be diabetic, identify history of complications such as findings related to heart disease; vascular disease; problems with eyes, kidneys, or feet; or autonomic or peripheral neuropathy.
2. Identify physician managing diabetic condition and prescribed treatment regimen,
3. Before starting exercise:
  - a. Obtain latest fasting plasma glucose (FPG) and glycosylated hemoglobin (HbA1c).
  - b. Consider stratifying patient to high-risk category because of the greater likelihood of exercise-induced complications.

**G. Tobacco Cessation Evaluation**

1. Ask the patient about smoking status and use of other tobacco products. Document status as never smoked, former smoker, current smoker (includes those who have quit in the last 12 months because of the high probability of relapse). Specify both amount of smoking (cigarettes per day) and duration of smoking (number of years). Quantify use and type of other tobacco products.
2. Determine readiness to change by asking every smoker/tobacco user if he or she is now ready to quit.
3. Assess for psychosocial factors that may impede success.
4. Ongoing Contact: Update status at each visit during first 2 weeks of cessation, periodically thereafter.

**H. Psychosocial Management Evaluation**

1. Identify psychological distress as indicated by clinically significant levels of depression, anxiety, anger or hostility, social isolation, marital/family distress, sexual dysfunction/adjustment, and substance abuse (alcohol or other psychotropic agents), using interview and/or standardized measurement tools.
4. Identify use of psychotropic medications

**I. Physical Activity Counseling Evaluation**

1. Assess current physical activity level (e.g., questionnaire, pedometer) and determine domestic, occupational, and recreational needs.
2. Evaluate activities relevant to age, gender, and daily life, such as driving, sexual activity, sports, gardening, and household tasks.
3. Assess readiness to change behavior, self-confidence, barriers to increased physical activity, and social support in making positive changes.

**J. Physical Training Evaluation**

1. Perform a symptom-limited exercise test. The evaluation may be repeated as changes in clinical condition warrant. Test parameters should include assessment of heart rate and rhythm, signs, symptoms, ST-segment changes, hemodynamics, perceived exertion, and exercise capacity (MET level).
2. Based on patient assessment and the exercise test, risk stratification of the patient will be done to determine the level of supervision and monitoring required during exercise training.

**IV. Cardiac Rehabilitation Program Interventions/Plan of Care**

**A. Medical Management Intervention**

1. Document the patient assessment (Appendix C) information that reflects the patient's current status/risk stratification.

2. Generate and document a patient treatment plan (including an exercise prescription) that prioritizes goals and outlines intervention strategies for risk reduction. The individualized treatment plan must be established, reviewed and signed by a physician every 30 days (Appendix D).
  3. Ensure that the patient is taking appropriate doses of aspirin, clopidogrel, beta-blockers, lipid-lowering agents, and ACE inhibitors or angiotensin receptor blockers as per the AHA/ACC, and that the patient has had an annual influenza vaccination.
- B. Nutritional Counseling Intervention**
1. Prescribe specific dietary modifications
  2. Educate and counsel patient (and appropriate family members/domestic partners) on dietary goals and how to attain them. Incorporate behavior change models and compliance strategies into counseling sessions.
- C. Weight Management Intervention**
1. In patients with BMI 25 kg/m<sup>2</sup> and/or waist 40 inches in men (102 cm) and 35 inches (88 cm) in women:
    - a. Establish reasonable short-term and long-term weight goals individualized to the patient and his or her associated risk factors.
    - b. Develop a combined diet, physical activity/exercise, and behavioral program designed to reduce total caloric intake, maintain appropriate intake of nutrients and fiber, and increase energy expenditure.
    - c. Aim for an energy deficit tailored to achieve weight goals
- D. Blood Pressure Management Intervention**
1. If blood pressure is 120-139 mm Hg systolic or 80-89 mm Hg diastolic:
    - a. Provide lifestyle modifications, including regular physical activity/exercise; weight management; moderate sodium restriction and increased consumption of fresh fruits, vegetables, and low-fat dairy products; alcohol moderation; and smoking cessation.
    - b. Provide drug therapy for patients with chronic kidney disease, heart failure, or diabetes if blood pressure is  $\geq 130/\geq 80$  mm Hg after lifestyle modification.
  2. If blood pressure is  $\geq 140$  mm Hg systolic or  $\geq 90$  mm Hg diastolic:
    - a. Provide lifestyle modification and drug therapy.
- E. Lipid Management Intervention**
1. Provide nutritional counseling consistent with the Therapeutic Lifestyle Change diet, such as the recommendation to add plant stanol/sterols and viscous fiber and the encouragement to consume more omega-3 fatty acids, as well as weight management counseling, as needed, in all patients. Add or intensify drug treatment in those with low-density lipoprotein  $>100$  mg/dL; consider adding drug treatment in those with low-density lipoprotein  $>70$  mg/dL.
  2. Provide interventions directed toward management of triglycerides to attain non-high-density lipoprotein cholesterol  $<130$  mg/dL.
  3. Provide and/or monitor drug treatment
- F. Diabetes Management Intervention**
1. Educate patient and staff to be alert for signs/symptoms of hypoglycemia or hyperglycemia and provide appropriate assessment and interventions.
  2. In those taking insulin or insulin secretagogues:
    - a. Avoid exercise at peak insulin times.
    - b. Advise that insulin be injected in abdomen, not muscle to be exercised.

- c. Test blood sugar levels pre- and post-exercise at each session: if blood sugar value is <100 mg/dL, delay exercise and provide patient 15 g of carbohydrate; retest in 15 minutes; proceed if blood sugar value >100 mg/dL; if blood sugar value is >300 mg/dL, patient may exercise if he or she feels well, is adequately hydrated, and blood and/or urine ketones are negative; otherwise, contact patient's physician for further treatment.
- d. Encourage adequate hydration to avoid effects of fluid shifts on blood sugar levels.
- e. Caution patient that blood sugar may continue to drop for 24-48 hours after exercise.
- f. In those treated with diet, metformin, alpha glucosidase inhibitors, and/or thiazolidinediones, without insulin or insulin secretagogues, test blood sugar levels prior to exercise for first 6-10 sessions to assess glycemic control; exercise is generally unlikely to cause hypoglycemia.
- g. Education: Teach and practice self-monitoring skills for use during unsupervised exercise. Refer to registered dietitian for medical nutrition therapy.

**G. Tobacco Cessation Intervention**

- 1. Provide individual education and counseling by program staff supplemented by self-teaching materials.
- 2. Promote social support by physician, program staff, family and/or domestic partner.
- 3. Promote relapse prevention: problem solving, anticipated threats, practice scenarios.

**H. Psychosocial Management Intervention**

- 1. Offer individual and/or small group education and counseling
- 2. Develop supportive rehabilitation environment and community resources
- 3. Teach and support self-help strategies.
- 4. Refer patients experiencing clinically significant psychosocial
- 5. distress to appropriate mental health specialists

**I. Physical Activity Counseling Intervention**

- 1. Provide advice, support, and counseling about physical activity needs on initial evaluation and in follow-up. Provide educational materials as part of counseling efforts. Consider exercise tolerance or simulated work testing for patients with heavy labor jobs.
- 2. Consistently encourage patients to accumulate 30-60 minutes per day of moderate-intensity physical activity on  $\geq 5$  (preferably most) days of the week.
- 3. Advise low-impact aerobic activity to minimize risk of musculoskeletal injury.
- 4. Caution patients to avoid performing unaccustomed vigorous physical activity (e.g., racquet sports and manual snow removal). Reassess the patient's ability to perform such activities as exercise training program progresses.

**J. Exercise Training Intervention**

- 1. Develop and document an individualized physician-prescribed exercise program for aerobic resistance and flexibility training that is based on evaluation findings, risk stratification, co-morbidities, and patient and program goals. Specify:
  - a. Aerobic Exercise
    - i. Mode: Utilize any of the following: treadmill, upright and recumbent cycle ergometer, elliptical, rower, stair climber, combo upper and lower extremity ergometers, arm ergometer.
    - ii. Frequency: At least 3 days per week, including home program.

d. Intensity: Determined from a Graded Exercise Test (GXT)

GXT with no symptoms: Use the maximum HR attained from GXT

Karvonen Method: Determine the training HR by adding to the resting heart rate a given percentage of the heart rate reserve (HRR), the difference between resting heart rate and the maximal HR.

Example: Rest HR = 60 bpm Max HR = 160

HRR = 160-60 = 100

Target HR = 60 to 80% HRR

100 X .6 = 60 + 60 = 120

100 X .8 = 80 + 60 = 140

GXT with symptoms: Use the point of onset of symptoms as the maximum. For exercise prescription, use HR that is at least 10 beats lower than onset of symptoms.

e. Time: 30-60 minutes. May be continuous or non-continuous exercise, if non-continuous should be a minimum of 10 minutes. Include warm up and cool down

Resistance Training

Initiate 5 weeks after cardiac surgery or MI including 4 weeks of Cardiac Rehab.

Initiate 3 weeks after PCI including 2 weeks of Cardiac Rehabilitation

Utilize elastic bands ,1-3 lb. hand wts, and light free wts may be started earlier if tolerated.

Flexibility Training: Stretching should be a part of the warm-up and cooldown

General guidelines for flexibility exercises

Frequency: Do stretching exercises at least 3 days a week.

Intensity: Stretch to a position of mild discomfort.

Duration: Hold each stretch for 10 to 30 seconds.

Repetition: Do each stretch 3 to 5 times.

Type: Control and hold without resistance, with emphasis on the lower back and legs.

2. Pre-Exercise Assessment and documentation at each exercise session
  - a. ECG surveillance (telemetry or hardwire monitoring, “quick-look,” or periodic rhythm strips)
  - b. Blood pressure
  - c. Body weight
  - d. Heart rate
  - e. Symptoms or evidence of change in clinical status
  - f. Symptoms or evidence of exercise intolerance
  - g. Medication compliance
  
3. Exercise session documentation
  - a. Pre-exercise and exercise HR (bpm)
  - b. Pre-exercise and exercise BP (mm Hg)



- c. Cardiac rhythm (include ECG rhythm strip if recorded)
  - d. Rate of perceived exertion
  - e. Training workload/MET level
  - f. Training session duration
  - g. Use of supplemental oxygen
  - h. Use of nitroglycerin before, during or after exercise
  - i. Physical assistance by program personnel
  - j. Any adverse responses (signs or symptoms) to exercise, including what actions were taken to remedy the adverse reaction and the result may include:
  - k. Musculoskeletal pain, discomfort, or injury
  - l. Angina or any chest discomfort
  - m. Dizziness
  - n. Arrhythmias
  - o. Other abnormal signs or symptoms
4. Intensity of Supervision and monitoring related to risk of exercise prescription
- a. Low risk patients
    - i. Direct staff supervision of exercise for a minimum of 6-18 exercise sessions or 30 days post-event or procedure, beginning with continuous ECG monitoring and decreasing to intermittent ECG monitoring as appropriate (e.g. at 6-18 sessions)
    - ii. For a patient to remain at low risk, his or her ECG and hemodynamic findings must remain normal, there must be no development of abnormal signs or symptoms either within or away from the exercise program, and progression of the exercise regimen must be appropriate.
  - b. Moderate risk patients
    - i. Direct staff supervision of exercise for a minimum of 12-24 exercise sessions or 60 days post-event or procedure, beginning with continuous ECG monitoring and decreasing to intermittent ECG monitoring as appropriate (e.g. at 12-18 sessions)
    - ii. For a patient to move to the lowest risk category, ECG and hemodynamic findings must remain normal, there must be no development of abnormal signs or symptoms either within or away from the exercise program, and progression of the exercise regimen must be appropriate.
    - iii. Abnormal ECG or hemodynamic findings during exercise, the development of abnormal signs or symptoms either within or away from the exercise program, or the need to severely decrease exercise levels may result in the patient remaining in the moderate risk category or even moving to the high-risk category
  - c. High risk patients
    - i. Direct staff supervision of exercise for a minimum of 18-36 exercise sessions or 90 days post-event or procedure, beginning with continuous ECG monitoring and decreasing to intermittent ECG monitoring as appropriate (e.g. at 18, 24 or 30 sessions) For a patient to move to the moderate risk category, ECG and hemodynamic findings must remain normal, there must be no development of abnormal signs or symptoms either within or away from the exercise program, and progression of the exercise regimen must be appropriate
    - ii. For a patient to move to the moderate risk category, ECG and hemodynamic findings must remain normal, there must be no development of abnormal signs or symptoms either within or away from the exercise program, and progression of the exercise regimen must be appropriate
    - iii. Abnormal ECG or hemodynamic findings during exercise, the development of abnormal signs or symptoms either within or away from the exercise program, or significant limitations in the

patient's ability to participate in the exercise regimen may result in discontinuation of the exercise program until appropriate evaluation and intervention where necessary can take place.

## **V. Cardiac Rehabilitation Program Expected Outcomes and Assessment**

### **A. Medical Management Expected Outcome**

1. Outcome Report: Documented evidence of patient outcomes within the components of care that reflects progress toward goals, including whether the patient is taking appropriate doses of aspirin, clopidogrel, beta-blockers, and ACE inhibitors or angiotensin receptor blockers as per the AHA/ACC, and identifies specific areas that require further intervention and monitoring (Appendix E).

### **B. Nutritional Counseling Expected Outcome**

1. Patient adheres to prescribed diet.
2. Patient understands basic principles of dietary content
3. A plan has been provided to address eating behavior problems.

### **C. Weight Management Expected Outcome**

1. Short-term: Continue to assess and modify interventions until progressive weight loss is achieved.
2. Long-term: Patient adheres to diet and physical activity/exercise program aimed toward attainment of established weight goal.

### **D. Blood Pressure Management Expected Outcome**

1. Short-term: Continue to assess and modify intervention until normalization of blood pressure in prehypertensive patients; <140 mm Hg systolic and <90 mm Hg diastolic in hypertensive patients; <130 mm Hg systolic and <80 mm Hg diastolic in hypertensive patients with diabetes, heart failure, or chronic kidney disease.
2. Long-term: Maintain blood pressure at goal levels.

### **E. Lipid Management Expected Outcome**

1. Short-term: Continue to assess and modify intervention until low-density lipoprotein is <100 mg/dL and non-high-density lipoprotein cholesterol <130 mg/dL
2. Long-term: Low-density lipoprotein cholesterol <100 mg/dL. Non-high-density lipoprotein cholesterol <130 mg/dL

### **F. Diabetes Management Expected Outcome**

1. Communicate with primary physician or endocrinologist about signs/symptoms and medication adjustments.
2. Confirm patient's ability to recognize signs/symptoms, self-monitor blood sugar status, and self-manage activities.
3. Attain FPG levels of 90-130 mg/dL and HbA1c <7%.
4. Minimize complications and reduce episodes of hypoglycemia or hyperglycemia at rest and/or with exercise.
5. Maintain blood pressure at <130/<80 mm Hg.

### **G. Tobacco Cessation Expected Outcome**

1. Short-term: Patient will demonstrate readiness to change by initially expressing decision to quit and selecting a quit date. Subsequently, patient will quit smoking and all tobacco use and adhere to

pharmacological therapy (if prescribed) while practicing relapse prevention strategies; patient will resume cessation plan as quickly as possible when temporary relapse occurs.

2. Long-term: Complete abstinence from smoking and use of all tobacco products for at least 12 months (maintenance) from quit date. No exposure to environmental tobacco smoke at work and home.

H. Psychosocial Management Expected Outcome

1. Patient shows emotional well-being as indicated by the absence of clinically significant psychological distress, social isolation, or drug dependency.
2. Patient demonstrates responsibility for health-related behavior change, relaxation, and other stress management skills

I. Physical Activity Counseling and Training Expected Outcome

1. Patient shows increased participation in domestic, occupational, and recreational activities.
2. Patient shows improved aerobic fitness and body composition
3. Patient achieves reduced symptoms and attenuated physiologic responses to physical challenges  
For Clinical, Behavioral and Health Outcomes, you will be asked to provide the following information:
4. Number patients that completed the program during (January 1 through December 31)
5. Description of Measurement (tools utilized)
6. Number of subjects, pre-program score, post-program score, % change/units of change or change towards goal
7. Narrative description of conclusions and process improvements made to program based on those conclusions

**VI. Staff Composition, Responsibilities and Qualifications.**

An interdisciplinary team composed of a program director/medical director; supervising physician, physician assistant or nurse practitioner, physical therapists, mental health professional; dietician or nutritionist.

A. Medical Director:

1. A physician to serve as medical director. The medical director shall be responsible for establishing all medical protocols, policies and procedures, ensuring the achievement and maintenance of quality standards of medical care, for overall patient care including participation in patient treatment planning meetings and for consultation with program personnel and referring physicians. Policies and procedures will be reviewed yearly by the medical director.
2. The medical director shall be a physician who is a board-certified cardiologist or is board certified in internal medicine or family practice and shall have recent clinical experience in caring for cardiac patients and experience in exercise testing and cardiac rehabilitation.
3. The medical director shall be currently certified in advanced cardiac life support by the American Heart Association.

B. Program Director

1. Bachelor's degree in an allied health field, such as exercise physiology, or licensure in the jurisdiction, for example, as a registered nurse or physical therapist.

2. Advanced knowledge of exercise physiology, nutrition, risk-factor modification strategies, counseling techniques, and uses of education programs and technologies as applied to cardiovascular rehabilitation and secondary prevention services.
  3. Experience in staff coordination and delivery of secondary prevention services to patients.
  4. Successful completion of an AHA Basic Life Support (BLS) or ACLS (if eligible to provide such services) courses.
  5. Certification, experience, and training equivalent to those specified for an Exercise Specialist by the ACSM, certification through the American Nurses Credentialing Center (ANCC), or the advanced specialty in cardiopulmonary rehabilitation of the American Physical Therapy Association.
  6. Preferred qualification: Successful completion of ACLS course
- C. Supervising physician, physician assistant or nurse practitioner
1. Shall collaborate with the Medical Director and Program Director in the operational and clinical aspects of the program.
  2. Primary responsibilities shall include, but not be limited to: patient education, participation in establishing and monitoring exercise therapy, EKG telemetry monitoring, provision of emergency care and maintenance of, regular, ongoing communication with the patient's referring physician and the cardiac rehabilitation staff
  3. This individual shall have experience in cardiology, exercise prescription and exercise testing. He/she shall be currently certified in advanced cardiac life support by the American Heart Association
- D. Physical Therapist.
1. A registered physical therapist shall be responsible for providing consultation to program staff and advising and/or implementing the exercise training sessions of the program and participating in the patient/family education program services.
  2. The physical therapist shall be currently certified in basic life support by the American Heart Association or the American Red Cross.
  3. There must be no more than a 4:1 patient to physical therapist ratio at any exercise session
- E. Dietitian/Nutritionist
1. A dietitian shall provide or supervise nutritional counseling services to the patient/family and assist program staff in monitoring patient progress towards nutritional goals.
  2. A dietitian responsible for nutritional counseling services shall be registered or eligible for registration by the American Dietetic Association.
- F. Psycho/social counselor
1. Shall assist patients in adjusting to illness. Will provide or supervise psycho/social counseling services to the patient/family and assist program staff in monitoring patient progress towards psycho/social goals
  2. Counseling services shall be provided by qualified professional staff who are licensed and/or registered in accordance with California state law

## **VII. Staff Education and Performance Review**

- A. Each staff member must successfully complete both initial and annual competency checks. Should a staff member have difficulty passing any competency, a specific educational program will be developed for that person by the rehab manager with a subsequent date set for re-assessment. If the staff member cannot then demonstrate competency, he/she will not be retained in that rehab position (Appendix F).

1. **New Employees:** Initial competencies will be based on the core expectations of staff job descriptions. An orientation checklist is available to document level of proficiency in meeting each of those expectations.
2. **Incumbent Employees:** Department- specific competencies – the Medical Director or Program Director will work with the staff to select at **least 4 rehab-related skills** to be developed or improved each year. Criteria for selection are based on JCAHO definitions of skills that are: high risk, problem-prone, infrequently used, or new. New includes demonstration of the correct use of any new piece of equipment used in patient care. Once identified, a quarterly schedule is set up and a skills checklist is developed to guide & document performance of each selected skill.
3. **An outline plan/calendar will be created to address/practice one skill per quarter**
4. **A skills checklist for each selected competency will be developed; including references/resources to be utilized by staff to provide the knowledge background needed to perform the skill.**

**VIII. Safety Precautions and Emergency Procedures**

- A. Monitoring During Exercise Therapy Sessions.
  1. Continuous electrocardiographic monitoring equipment shall be available for use with new participants and for periodic checks as deemed necessary by the supervising personnel.
  2. The medical director or his/her designated physician/physician assistant shall be present on the premises during exercise therapy sessions. The exercise training area must be in an area easily accessible to the hospital's medical emergency response team. The designated physician shall be qualified to respond to cardiac emergencies and be currently certified by the American Heart Association in Advanced Cardiac Life Support (ACLS).
- B. Emergencies/Cardiopulmonary Resuscitation Preparedness. (See Appendices H and I)
  1. All health care personnel in attendance at the exercise sessions shall be certified in Basic Life Support by the American Heart Association and trained in the use of a defibrillator and/or AED).
  2. **Procedures to follow in the event of an emergency are contained in the STANDING ORDERS DURING EXERCISE SESSIONS.**
  3. There shall be periodic review and drill of this protocol by the staff frequently enough to maintain proficiency during emergencies and in all instances at least on a **quarterly basis. A written record of the drills shall be maintained.** The following are examples of medical emergency in-services: Mock codes, review of crash cart/defibrillator or critique of an actual code

<b>Date</b>	<b>Brief description of medical emergency in - service</b>
<b>Date</b>	<b>Brief description of medical emergency in - service</b>
<b>Date</b>	<b>Brief description of medical emergency in - service</b>

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<b>Date</b>	<b>Brief description of medical emergency in - service</b>
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4. Emergency instructions shall be posted in the exercise area (Standing Orders During Exercise Sessions).
5. Emergency drugs and equipment for initiation of Advanced Cardiac Life Support shall be located the exercise area during all exercise sessions. Such drugs shall be accessible only to authorized persons. Expired drugs and sterile supplies shall be removed from storage.
6. At a minimum emergency supplies shall include:
  - a. Portable defibrillator with "quick" look capabilities
  - b. Oxygen tank with regulator and mask
  - c. Suction and intubation equipment
  - d. Emergency drugs and intravenous equipment
  - e. Blood pressure cuff and stethoscope
  - f. Sublingual nitroglycerin
  - g. Timing device which times to the second.

2018 – NEW  
August 2022 - Reviewed

Appendix A



RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER  
PHYSICIAN REFERRAL FOR CARDIAC REHABILITATION PARTICIPATION

*I have referred the following patient to Phase 2 cardiac rehabilitation for monitored exercise, risk factor modification, and heart disease education.*

Patient's Name: \_\_\_\_\_

DOB: \_\_\_\_\_

<b>DIAGNOSIS:</b>
<b>MI (date):</b>
<b>CABG (date):</b>
<b>HEART VALVE REPAIR/REPLACEMENT (date):</b>
<b>PTCA/STENTING (date):</b>
<b>OTHER HEART SURGERIES:</b>
<b>CURRENT STABLE ANGINA: YES / NO</b>
<b>LIMITATIONS SET BY REFERRING PHYSICIAN:</b>
<b>Comments:</b>

Referring Physician's Office Contact Information

Name: \_\_\_\_\_

Phone Number \_\_\_\_\_

Physician Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## **Appendix B**



### **RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER INFORMED CONSENT FOR CARDIAC REHABILITATION PARTICIPATION**

**Name:** \_\_\_\_\_

#### **1. Purpose and Explanation the Cardiac Rehabilitation Program**

In order to improve my physical capacity and generally aid in my medical treatment for heart disease, I hereby consent to enter a cardiac rehabilitation program that will include cardiovascular monitoring, physical exercise, dietary counseling, smoking cessation, stress reduction, and health education activities. The levels of exercise that I will perform will be based on the condition of my heart and circulation as determined by my physician. I will be given exact instructions regarding the amount and kind of exercise I should do. Professionally trained clinical personnel will provide leadership to direct my activities and monitor my electrocardiogram and blood pressure to be sure that I am exercising at the prescribed level. Depending on my progress, the program staff and physician may adjust my exercise sessions.

#### **2. Responsibility of the Participant**

- I understand that I am expected to attend every session and to follow physician and staff instructions regarding any medications that have been prescribed, exercise, diet, stress management, and smoking cessation.
- I agree to inform the program staff promptly of any changes my doctor or I have made with the medications I am taking.
- I agree to learn how to count my own pulse rate and record it before, during and at the end of each exercise session, as instructed by program staff members.
- I agree to report to the rehabilitation staff any unusual, new or worsened symptoms associated with my exercise program. These include but are not limited to unusual shortness of breath with low level activity; pain, pressure, tightness, heaviness in the chest, neck, jaw, back, and/or arms; unusual fatigue with exercise; unusually fast, slow or irregular heart rate; faintness or dizziness.

#### **3. Attendant Risks and Discomforts**

I understand that there exists the possibility of certain changes occurring during exercise sessions. These include abnormal blood pressure; fainting; irregular, fast, or slow heart rhythm; and in rare instances, heart attack; stroke or death. Every effort will be made to minimize those risks by provision of appropriate supervision during exercise. Emergency equipment and trained personnel are available to deal with unusual situations that may arise. Knowing these risks, it is my desire to proceed to participate in the cardiac rehabilitation program as herein indicated.

#### **4. Benefits to be Expected**

It is my understanding that participation in the rehabilitation program may help to evaluate which activities I may safely engage in during my daily life. I may also improve my physical work capacity and ability to control my weight. I understand that no assurance can be given that the rehabilitation program will increase my exercise tolerance, although considerable evidence indicates improvement is usually achieved.

#### **5. Confidentiality**

I understand that the information that is obtained while I am a participant in the Cardiac Rehabilitation Program will be treated as privileged and confidential. It is not to be released or revealed to any person except my physicians without my written consent. The information obtained, however, may be used for statistical analysis or scientific purposes with my right to privacy retained.



**6. Inquiries**

I have been given an opportunity to ask any questions regarding this program.

**7. Freedom of Consent**

I agree to voluntarily participate in the Cardiac Rehabilitation Program. I understand that I am free to deny any consent if I so desire, both now and at any point in the program. I acknowledge that I have read this form in its entirety or it has been read to me, and I understand my responsibility in the Cardiac Rehabilitation Program in which I will be engaged. I accept the risks, rules and regulations set forth. Knowing these and having had an opportunity to ask questions that have been answered to my satisfaction, I consent to participate in this Cardiac Rehabilitation Program.

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Signature of Patient \_\_\_\_\_ Date \_\_\_\_\_

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Signature of Witness \_\_\_\_\_ Date \_\_\_\_\_

---

Signature of Program Staff \_\_\_\_\_ Date \_\_\_\_\_

**APPENDIX C**

COUNTY OF LOS ANGELES

RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER

DEPARTMENT OF HEALTH SERVICES

**INITIAL CARDIAC REHABILITATION PATIENT ASSESSMENT**

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ REFERRAL SOURCE: \_\_\_\_\_ PHONE: \_\_\_\_\_

**HISTORY**  MI Date: \_\_\_\_\_  ARREST Date: \_\_\_\_\_  
 CABG Date: \_\_\_\_\_  TRANSPLANT Date: \_\_\_\_\_  
 ACS Date: \_\_\_\_\_  LV ASSISST Date: \_\_\_\_\_  
 PTCA Date: \_\_\_\_\_  HEART FAILURE Date: \_\_\_\_\_  
 PVD Date: \_\_\_\_\_  PACEMAKER / ICD Date: \_\_\_\_\_  
 CVA Date: \_\_\_\_\_  VALVE SURGERY Date: \_\_\_\_\_  
 OTHER \_\_\_\_\_

**MEDICATIONS:** \_\_\_\_\_

**RISK FACTOR**  SMOKING # packs/day \_\_\_\_\_  Former Smoker  Other Tobacco Products  Never  
**PROFILE**

DYSLIPIDEMIA Date: \_\_\_\_\_ T CHOL \_\_\_\_\_ HDL \_\_\_\_\_ LDL \_\_\_\_\_ TRIG \_\_\_\_\_  
 OBESITY HT: \_\_\_\_\_ WT: \_\_\_\_\_ BMI: \_\_\_\_\_  HYPERTENSION  PHYSICAL INACIVITY  
 FAMILY HX  Mother  Father  Siblings  STRESS  SUBSTANCE ABUSE

**PHYSICAL** BP (Left) \_\_\_\_/\_\_\_\_ BP (Right) \_\_\_\_/\_\_\_\_ Orthostatic: BP (Supine) \_\_\_\_/\_\_\_\_ BP (Standing) \_\_\_\_/\_\_\_\_

**EXAM** HEENT: \_\_\_\_\_  
Chest/Lung: \_\_\_\_\_ Brest: \_\_\_\_\_  
Carotid \_\_\_\_\_ JVD: \_\_\_\_\_  
Cardiac: \_\_\_\_\_  
Abdomen: \_\_\_\_\_  
GU: \_\_\_\_\_  
Extremity \_\_\_\_\_  
Pulses: \_\_\_\_\_  
Neuro: \_\_\_\_\_

**PRESENT**  SOB  DOE  Orthopnea  PND  Palpitations  Claudication

**SYMPTOMS**  Chest Pain Dur. \_\_\_\_\_ Loc. \_\_\_\_\_ Radiation \_\_\_\_\_ Character \_\_\_\_\_  
Freq. \_\_\_\_\_ Activity \_\_\_\_\_ Relieved by \_\_\_\_\_  
Associated Symptoms: \_\_\_\_\_

**DIAGNOSTIC** ECG Date: \_\_\_\_\_ Holter Date: \_\_\_\_\_

**RESULTS** Echo Date: \_\_\_\_\_ Stress Date: \_\_\_\_\_  
Angiogram Date: \_\_\_\_\_ Other Date: \_\_\_\_\_



PATIENT INFORMATION

MRUN \_\_\_\_\_

NAME \_\_\_\_\_

DOB/GENDER \_\_\_\_\_

**CARDIAC REHABILITATION NOTE**

FILE IN MEDICAL RECORD

**APPENDIX C**

COUNTY OF LOS ANGELES

RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER

DEPARTMENT OF HEALTH SERVICES

**INITIAL CARDIAC REHABILITATION PATIENT ASSESSMENT**

**RISK LEVEL**

Low

1. Absence of complex ventricular arrhythmias during exercise testing or recovery. 2. Absence of angina or other significant symptoms (i.e., unusual shortness of breath, lightheadedness or dizziness at low levels of exertion [ $<5$  METs] or during recovery). 3. Presence of normal hemodynamics during exercise testing and recovery (i.e., appropriate increase and decrease in heart rate and systolic BP with increasing workloads and recovery). 4. Functional capacity  $>7$  METs. 5. Rest ejection fraction  $\geq 50\%$ . 6. Uncomplicated MI or revascularization procedure. 7. Absence of complex dysrhythmias at rest. 8. Absence of CHF. 9. Absence of signs/symptoms of postevent/post procedure ischemia. 10. Absence of clinical depression.

Moderate

1. Presence of angina or other significant symptoms (e.g., unusual shortness of breath, light headedness, or dizziness occurring only at high levels of exertion [ $>7$  METs]). 2. Mild to moderate level of silent ischemia during exercise or recovery (ST segment depression  $< 2$  mm from baseline). 3. Functional capacity  $<5$  METs. 4. Rest ejection fraction = 40-49%

High

1. Presence of complex ventricular arrhythmias during exercise testing or recovery. 2. Presence of angina or other significant symptoms (i.e., unusual shortness of breath, lightheadedness or dizziness at low levels of exertion [ $<5$  METs] or during recovery). 3. High level of silent ischemia (ST segment depression  $> 2$  mm from baseline) during exercise or recovery. 4. Presence of abnormal hemodynamics with exercise testing (i.e., chronotropic incompetence or flat or decreasing systolic BP with increasing workloads) or recovery (i.e., severe postexercise hypotension). 5. Rest ejection fraction  $<40\%$ .  
6. History of cardiac arrest or cardiogenic shock.  
7. Complex dysrhythmias at rest.  
8. Complicated MI or revascularization procedure.  
9. Presence of CHF.  
10. Presence of signs/symptoms of postevent/post procedure ischemia.  
11. Presence of clinical depression.

**SOCIAL HISTORY** Marital Status  Single  Married  Permanent Partner  Divorced  Widowed  
 Patient Lives With:  Partner  Spouse  Alone  Relative  Dependants  Other  
 Working Status: \_\_\_\_\_ Leisure Activities: \_\_\_\_\_  
 Patient Goals \_\_\_\_\_

**PHYSICIAN**  Lipid Panel  CBC with differential  Basic Metabolic Panel  Comp Metabolic Panel  
 ECG  Holter  Echo  Stress test  Echo with Stress  6 Minute Walk Test  
 Dietary Consult  Psychology Consult  PT Consult  OT Consult  
 Education/Counseling/Classes  Smoking Cessation  Diet  Wt. Management  Diabetes  
 Exercise  Stress Management  Other

**ADDITIONAL COMMENTS**

PHYSICIAN: \_\_\_\_\_



PATIENT INFORMATION

MRUN

NAME

DOB/GENDER

## **APPENDIX D**

### **STANDING ORDERS FOR EMERGENCY RESPONSE DURING EXERCISE SESSIONS**

#### **CARDIOPULMONARY ARREST:**

- Any member of the CR team has the prerogative to activate Code Blue upon finding patient unresponsive. Please refer to Rancho Los Amigos NRC Policy No. B812.1: “Medical Emergency Response: Code Blue, Code White, Rapid Response, Code Assist.” Call supervising physician.
- Physical therapists place the patient in safe position, undress patient, and initiate CPR
- Nurse practitioners check for pulse, start IV, attach defibrillator pads, and give reports of patient history and telemetry finding to Code Blue team leader.
- Upon ROSC, CR team gives medical reports to admission team. CR notifies patient’s family members. Supervising physician communicates to referring physician of event.

#### **ANGINA/CHEST PAIN:**

- If a patient develops chest pain while in the CR gym, physical therapists should immediately discontinue exercise & place patient in seat or gurney
- Nurse practitioners check pulse, blood pressure, and cardiac rhythm on telemetry (attach telemetry monitor if not already monitored). Administer sublingual nitroglycerin spray x 3 as appropriate.
- If symptom resolves:
  - If patient has chronic stable angina, patient can resume exercise session at a lower workload. Nurse practitioners can titrate antianginals as appropriate. Nurse practitioners should monitor patient closely during subsequent exercise sessions.
  - If angina is of new onset, nurse practitioners should communicate event to supervising physician. The supervising physician should evaluate the patient and inform patient’s primary referring physician of the results of his/her evaluations and recommended treatment, if any. The supervising physician can determine whether and when it is safe to resume exercise program.
- If symptom persists or worsens:
  - CR team should call Code Assist & the supervising physician.
  - Nurse practitioners order 12-lead ECG. Nurse practitioners give reports of patient history and telemetry finding to Code Assist team for admission. CR team notifies patient’s family members and communicates to referring physician of event.

#### **ACUTE DYSPNEA**

- Physical therapists immediately discontinue exercise & place patient in seat
- Nurse practitioners check pulse, blood pressure, and cardiac rhythm on telemetry (attach telemetry monitor if not already monitored). Assess SaO<sub>2</sub> with pulse oximeter. If <94%, administer supplemental oxygen via nasal cannula at 2 to 4 liters.
- If symptom resolves:
  - If patient has chronic obstructive pulmonary disease or chronic stable heart failure, patient can resume exercise session at a lower workload. Nurse practitioners can titrate pulmonary or cardiac medications as appropriate. Nurse practitioners should monitor patient closely during subsequent exercise sessions.
  - If dyspnea is of new onset, nurse practitioners should communicate event to supervising physician. The supervising physician should evaluate the patient and inform patient’s primary referring physician of the results of his/her evaluations and recommended treatment, if any. The supervising physician can determine whether and when it is safe to resume exercise program.
- If symptom persists or worsens:
  - CR team should call Code Assist & the supervising physician.
  - Nurse practitioners order 12-lead ECG. Nurse practitioners give reports of patient history and telemetry finding to Code Assist team leader for admission. CR team notifies patient’s family members and communicates to referring physician of event.

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**APPENDIX D**

**STANDING ORDERS FOR EMERGENCY RESPONSE DURING EXERCISE SESSIONS**

**TACHYCARDIA**

- If heart rate >100 <130 bpm, asymptomatic, CR team should check blood pressure and cardiac rhythm on telemetry (attach telemetry monitor if not already monitored). If blood pressure and rhythm are patient's baseline, OK to proceed with exercise session.
- If heart rate >130 bpm, asymptomatic, CR team should check blood pressure and cardiac rhythm on telemetry (attach telemetry monitor if not already monitored). If persist >2 minutes of rest, CR team should pause the exercise session and contact supervising physician. Nurse practitioner should order a 12 lead ECG.
  - If patient has underlying tachyarrhythmia history (e.g. atrial fibrillation), nurse practitioners can titrate rate-control medications as appropriate. Nurse practitioners should communicate with supervising physician and referring physician to ensure proper follow up plan. Nurse practitioners should monitor patient closely during subsequent exercise sessions.
  - If tachyarrhythmia is new, the nurse practitioner should communicate with the supervising physician. The supervising physician should evaluate the patient and inform patient's primary referring physician of the results of his/her evaluations and recommended treatment, if any. The supervising physician can determine whether and when it is safe to resume exercise program.
- If heart rate >100 bpm and patient is symptomatic with chest pain, dyspnea, or dizziness:
  - Physical therapists should immediately discontinue exercise & place patient in seat or gurney.
  - Nurse practitioners should check blood pressure and cardiac rhythm on telemetry (attach telemetry monitor if not already monitored). Assess SaO<sub>2</sub> with pulse oximeter. If <94%, administer supplemental oxygen via nasal cannula at 2 to 4 liters. Evaluate for hypoglycemia (see Hypoglycemia section). Order a 12 lead ECG.
  - If symptom resolves, and patient has underlying tachyarrhythmia history (e.g. atrial fibrillation), nurse practitioners can titrate rate-control medications as appropriate. Nurse practitioners should communicate with supervising physician and referring physician to ensure proper follow up plan. Nurse practitioners should monitor patient closely during subsequent exercise sessions.
  - If tachyarrhythmia is of new onset, nurse practitioners should communicate event to supervising physician. The supervising physician should evaluate the patient and inform patient's primary referring physician of the results of his/her evaluations and recommended treatment, if any. The supervising physician can determine whether and when it is safe to resume exercise program.
  - If symptom persists or worsens, CR team should call Code Assist & the supervising physician. Nurse practitioners order 12-lead ECG. Nurse practitioners give reports of patient history and telemetry finding to Code Assist team leader for admission. CR team notifies patient's family members and communicates to referring physician of event.

**BRADYCARDIA**

- If heart rate <60 >40 bpm, asymptomatic, CR team should check blood pressure and cardiac rhythm on telemetry (attach telemetry monitor if not already monitored). If blood pressure and rhythm are patient's baseline, OK to proceed with exercise session.
- If heart rate <40 bpm, asymptomatic, CR team should check blood pressure and cardiac rhythm on telemetry (attach telemetry monitor if not already monitored) and pause the exercise session.
  - If patient has bradycardia due to medications, nurse practitioners can titrate medications down as appropriate. Nurse practitioners should communicate with supervising physician and referring physician to ensure proper follow up plan. Nurse practitioners should monitor patient closely during subsequent exercise sessions.
  - If bradyarrhythmia is new, the nurse practitioner should check oxygen saturation, order a 12 lead ECG, and communicate with the supervising physician. The supervising physician should evaluate the patient and inform patient's primary referring physician of the results of his/her evaluations and recommended treatment, if any. The supervising physician can determine whether and when it is safe to resume exercise program.
- If heart rate <60 bpm and patient is symptomatic with chest pain, dyspnea, or dizziness:
  - Physical therapists should immediately discontinue exercise & place patient in seat or gurney.
  - Nurse practitioners should check blood pressure and cardiac rhythm on telemetry (attach telemetry monitor if not already monitored). Assess SaO<sub>2</sub> with pulse oximeter. If <94%, administer supplemental oxygen via nasal cannula at 2 to 4 liters. Nurse practitioners should order a 12 lead ECG.

**APPENDIX D  
STANDING ORDERS FOR EMERGENCY RESPONSE DURING EXERCISE SESSIONS**

- If patient in persistent bradycardia but with good perfusion and normal oxygen saturation, nurse practitioner should communicate event to supervising physician. The supervising physician should evaluate the patient and inform patient's primary referring physician of the results of his/her evaluations and recommended treatment, if any. The supervising physician can determine whether and when it is safe to resume exercise program.
- If telemetry or ECG shows heart block, if vitals unstable, or if symptom persists or worsens, CR team should call Code Assist & the supervising physician. Nurse practitioners should insert IV and place pacer pads on the patient. Nurse practitioners should give reports of patient history and telemetry finding to Code Assist team leader for admission. CR team notifies patient's family members and communicates to referring physician of event.

**HYPERTENSION:**

- If resting systolic blood pressure is  $>160 <190$  mmHg, or diastolic blood pressure is  $>90 <105$  mmHg in a previously normotensive patient, the nurse practitioners should assess for symptoms of acute target-organ involvement (e.g. neurologic, visual, cardiac).
  - If asymptomatic, have patient rest for five minutes and retake the blood pressure. If blood pressure comes down with rest below the above levels, patient can resume exercise session. If blood pressure remains elevated despite rest, cancel the exercise session. The nurse practitioners should educate the patient and titrate the antihypertensive medications as appropriate. The CR team should monitor patient's blood pressure closely during subsequent sessions.
  - If symptomatic, CR team should call Code Assist & the supervising physician. Nurse practitioners order 12-lead ECG and insert IV. Nurse practitioners give reports of patient history and telemetry finding to Code Assist team leader for admission. CR team notifies patient's family members and communicates to referring physician of event.
- If resting systolic blood pressure is  $>190$  mmHg or diastolic blood pressure is  $>105$  mmHg in a previously hypertensive patient, the nurse practitioners should assess for symptoms of acute target-organ involvement (e.g. neurologic, visual, cardiac).
  - If asymptomatic, have patient rest for five minutes and retake the blood pressure. If blood pressure comes down with rest below the above levels, patient can resume exercise session. If blood pressure remains elevated despite rest, cancel the exercise session. The nurse practitioners should titrate the antihypertensive medications as appropriate and communicate event to supervising physicians. The CR team should monitor patient's blood pressure closely during subsequent sessions.
  - If symptomatic, CR team should call Code Assist & the supervising physician. Nurse practitioners order 12-lead ECG and insert IV. Nurse practitioners give reports of patient history and telemetry finding to Code Assist team leader for admission. CR team notifies patient's family members and communicates to referring physician of event.
- If during exercise systolic blood pressure is  $>160 <190$  mmHg, or diastolic blood pressure is  $>90 <105$  mmHg, asymptomatic, the physical therapists should have patient cool down and then rest for five minutes. Resume exercise at lower intensity.
- If during exercise systolic blood pressure is  $>190$  mmHg, or diastolic blood pressure is  $>105$  mmHg, asymptomatic, the physical therapists should have patient cool down and then rest. The nurse practitioner should evaluate the patient and titrate antihypertensive medications as appropriate and notify the supervising physician of event.
- If symptom of angina or dyspnea, refer to above sections.

**HYPOTENSION**

- If resting systolic blood pressure is  $<100 >90$  mmHg or diastolic blood pressure  $<60 >50$  mmHg in a previously normotensive patient, the nurse practitioners should evaluate patient for symptoms of hypoperfusion (e.g. confusion, cold clammy skin). If the patient is asymptomatic, proceed with exercise. Monitor blood pressure closely (q 1-2 minutes) until ascertaining blood pressure increase with exercise. If patient is symptomatic, cancel the exercise session. Attach telemetry monitor if not already monitored. Call the supervising physician. The supervising physician should evaluate the patient and inform patient's primary referring physician of the results of his/her evaluations and recommended treatment, if any. The supervising physician can determine whether and when it is safe to resume exercise program.

**APPENDIX D  
STANDING ORDERS FOR EMERGENCY RESPONSE DURING EXERCISE SESSIONS**

- If resting systolic blood pressure is <90 mmHg or diastolic blood pressure <50 mmHg, the nurse practitioners should evaluate patient for symptoms of hypoperfusion (e.g. confusion, cold clammy skin). If the patient is asymptomatic, call the supervising physician. The supervising physician should evaluate the patient and inform patient's primary referring physician of the results of his/her evaluations and recommended treatment, if any. The supervising physician can determine whether and when it is safe to resume exercise program. If the patient is symptomatic, activate Code Assist & the supervising physician. Attach telemetry monitor if not already monitored. Nurse practitioners order 12-lead ECG and insert IV. Nurse practitioners give reports of patient history and telemetry finding to Code Assist team leader for admission. CR team notifies patient's family members and communicates to referring physician of event.
- If during exercise there is a drop in systolic blood pressure of >10 mmHg from baseline, the physical therapists should have patient cool down and then rest. The nurse practitioners should evaluate patient for symptoms of hypoperfusion or poor cardiac output. If none present, can resume exercise at a lower level and communicate event to the supervising physician.
- If during exercise there is a drop in systolic blood pressure of >10 mmHg from baseline, and patient exhibits symptoms of hypoperfusion (dizziness, diaphoresis, pallor, or confusion), the physical therapists should immediately discontinue exercise & place patient in seat or gurney. Call Code Assist & the supervising physician. Attach telemetry monitor if not already monitored. Nurse practitioners order 12-lead ECG and insert IV. Nurse practitioners give reports of patient history and telemetry finding to Code Assist team for admission. CR team notifies patient's family members and communicates to referring physician of event.

**HYPERGLYCEMIA:**

- If patient complains of symptoms suggestive of hyperglycemia (e.g. increased thirst, frequent urination, blurry vision, confusion), patient should not exercise. Nurse practitioners should check blood glucose level using glucometer in the CR gym. If blood glucose > 250 mg/dL, the nurse practitioners should instruct the patient to go to urgent care. The CR team should notify the supervising physician and the referring physician of the event. The nurse practitioners should notify the patient's primary care physician to ensure proper follow up for patient's uncontrolled diabetes.
- If patient reports own glucometer reading of blood glucose > 250 mg/dL prior to arrival but is asymptomatic, the nurse practitioner should check the blood glucose with the glucometer in the CR gym. If blood glucose is confirmed to be >250 mg/dL, cancel the exercise session. The nurse practitioners should educate the patient about diet and adjust the diabetic medications as appropriate and ensure proper follow up with patient's primary care physician.

**HYPOGLYCEMIA:**

- If patient exhibits symptoms / signs of hypoglycemia (e.g. headache, weakness, diaphoresis, shakiness, faintness, blurred or double vision, unsteady gait), nurse practitioners should check blood glucose level using glucometer in the CR gym. If blood glucose < 70 mg/dl, give oral glucose gel or other glucose replacement. Nurse practitioners should recheck blood glucose level. Recheck finger stick in 15 minutes and every 15 minutes until blood glucose is greater than 70 mg/dL. Nurse practitioners should educate the patient on prevention of hypoglycemia and adjust the patient's diabetic medications as appropriate. Nurse practitioner should communicate event to supervising physician and to the patient's primary care physician to ensure proper follow-up.
- If patient exhibits severe symptoms / signs of hypoglycemia (e.g. confusion, aggressive or erratic behavior, or altered mental status), the CR team should call Code Assist & supervising physician. Nurse practitioners should check blood glucose level and insert IV. Nurse practitioners should give reports of patient history and glucometer findings to Code Assist team leader for admission. CR team notifies patient's family members and communicates to referring physician of event.
- Refer to RLANRC Policy No. C119.11 "Emergency Treatment of Hypoglycemia."

**APPENDIX D**

COUNTY OF LOS ANGELES

DEPARTMENT OF HEALTH SERVICES

RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER

**CARDIAC REHABILITATION INDIVIDUAL TREATMENT PLAN**

<p>(Check all that apply) <span style="float: right;">Date</span></p> <p><b>EXERCISE: Initial Assessment</b></p> <p>Stages of change: <input type="checkbox"/> Pre-contemplation <input type="checkbox"/> Contemplation <input type="checkbox"/> Preparation  <input type="checkbox"/> Action <input type="checkbox"/> Maintenance <input type="checkbox"/> Relapse</p> <p><input type="checkbox"/> 6 MWT <input type="checkbox"/> Stress test <input type="checkbox"/> Other</p> <p>Walked ft. <span style="margin-left: 100px;">Max HR</span></p> <p>RPE: <span style="margin-left: 50px;">SPO<sub>2</sub>:</span> <span style="margin-left: 50px;">MET level:</span></p> <p>-----</p> <p style="text-align: center;"><b>Exercise Prescription</b></p> <p>Mode: <input type="checkbox"/> TM <input type="checkbox"/> Leg erg <input type="checkbox"/> Arm erg <input type="checkbox"/> 4 ext erg <input type="checkbox"/> Nstp</p> <p>Freq: <span style="margin-left: 50px;">Dur:</span> <span style="margin-left: 50px;">Intensity :</span></p> <p>Progression : <span style="margin-left: 100px;">THR:</span></p> <p><input type="checkbox"/> Angina with ex.</p> <p><input type="checkbox"/> Resistance ex <span style="margin-left: 50px;">Wt# :</span> <span style="margin-left: 50px;">Reps :</span></p> <p><b>Hypertension:</b> <input type="checkbox"/> No <input type="checkbox"/> Yes</p> <p><b>Blood Pressure :</b> Rest: <span style="margin-left: 50px;">Peak ex</span></p> <p>Meds:</p> <p>-----</p> <p style="text-align: center;"><b>Intervention</b></p> <p><b>Home ex:</b> Type : <span style="margin-left: 50px;">Freq:</span> <span style="margin-left: 50px;">Dur :</span></p> <p><input type="checkbox"/> Resistance ex</p> <p><b>Education:</b> <input type="checkbox"/> Self pulse <input type="checkbox"/> Wm-up/cl-dn <input type="checkbox"/> Low Na diet  <input type="checkbox"/> Understanding BP <input type="checkbox"/> RPE scale <input type="checkbox"/> Ex safety  <input type="checkbox"/> BP meds <input type="checkbox"/> Physical activity <input type="checkbox"/> Equip orient  <input type="checkbox"/> S/S to report</p> <p><b>Target Goals:</b>          Individual exercise Rx          BP&lt;140/90 or &lt; 130/80 if DM or CKD          Aerobic activity 30+min 5 days/week</p>	<p>(Check all that apply) <span style="float: right;">Date</span></p> <p><b>NUTRITION Initial Assessment</b></p> <p>Stages of change: <input type="checkbox"/> Pre-contemplation <input type="checkbox"/> Contemplation <input type="checkbox"/> Preparation  <input type="checkbox"/> Action <input type="checkbox"/> Maintenance <input type="checkbox"/> Relapse</p> <p>Lipids: Total chol: <span style="margin-left: 50px;">HDL:</span> <span style="margin-left: 50px;">LDL:</span> <span style="margin-left: 50px;">Trig:</span></p> <p><input type="checkbox"/> Med change</p> <p>Diabetes: FBS: <span style="margin-left: 50px;">HbA1c:</span></p> <p><input type="checkbox"/> Med change <span style="margin-left: 50px;">Random BS</span> <input type="checkbox"/> BS in range</p> <p>-----</p> <p style="text-align: center;"><b>Weight Management</b></p> <p>Wt: <span style="margin-left: 20px;">Ht:</span> <span style="margin-left: 20px;">BMI:</span> <span style="margin-left: 20px;">%Fat:</span> <span style="margin-left: 20px;">Waist circ:</span></p> <p>Wt goal:</p> <p>Alcohol: <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Special <input type="checkbox"/> None</p> <p>Type: <span style="margin-left: 50px;">Amount:</span></p> <p>Diet assess tool: <span style="margin-left: 150px;">Score:</span></p> <p>Special diet:</p> <p>-----</p> <p style="text-align: center;"><b>Intervention</b></p> <p><input type="checkbox"/> Dietician consult <span style="margin-left: 100px;"><input type="checkbox"/> Nurse/patient discussion</span></p> <p>Dietary goal  <input type="checkbox"/> Diet class <input type="checkbox"/> Referred to Diabetes education  <input type="checkbox"/> Referred to lipid clinic <input type="checkbox"/> Referred to wt mgt class</p> <p>Education: <input type="checkbox"/> S&amp;S hypo/hyperglycemia <input type="checkbox"/> Eating healthy  <input type="checkbox"/> Relate Diabetes</p> <p><b>Target Goal:</b>          LDL-C&lt;100 if triglycerides are &gt; 200          Non-HDL-C should be &lt;130          LDL-C&lt;70 for high risk patients          HbA1c&lt;7%          BMI&lt;25 <span style="margin-left: 20px;">Waist circ &lt;40in M/&lt;35 in F</span></p>
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PATIENT INFORMATION

MRUN

NAME

DOB/GENDER

CARDIAC REHABILITATION NOTE



**APPENDIX D**

COUNTY OF LOS ANGELES

RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER

DEPARTMENT OF HEALTH SERVICES

**CARDIAC REHABILITATION INDIVIDUAL TREATMENT PLAN**

<p>(Check all that apply)      Date</p> <p><b>EDUCATION:      Initial Assessment</b></p> <p>Learning barriers: <input type="checkbox"/> Speech   <input type="checkbox"/> Hearing   <input type="checkbox"/> Vision  <input type="checkbox"/> Literacy   <input type="checkbox"/> Cognitive   <input type="checkbox"/> Ready to learn</p> <p>Knowledge test score:</p> <p>Stages of change: <input type="checkbox"/> Pre-contemplation   <input type="checkbox"/> Contemplation   <input type="checkbox"/> Preparation  <input type="checkbox"/> Action   <input type="checkbox"/> Maintenance   <input type="checkbox"/> Relapse</p> <p><input type="checkbox"/> <b>Family support</b></p> <p><b>Tobacco Use:</b> <input type="checkbox"/> Yes   <input type="checkbox"/> No  <input type="checkbox"/> Quit &lt; 6 months   <input type="checkbox"/> Quit &gt; 6 months</p> <p>Date started:</p> <p>Date quit:</p> <p>Quit date set:</p> <p># cigarettes smoked per day:</p> <p><input type="checkbox"/> Smokeless tobacco      amount :</p> <hr/> <p style="text-align: center;"><b>Intervention</b></p> <p><input type="checkbox"/> Referred to smoking cessation class  <input type="checkbox"/> Individual education and counseling  <input type="checkbox"/> Tobacco adjunct  <input type="checkbox"/> Education class schedule given</p> <p><b>Education:</b> <input type="checkbox"/> Tobacco triggers   <input type="checkbox"/> CAD   <input type="checkbox"/> Risk factors  <input type="checkbox"/> Med compliance   <input type="checkbox"/> Cardiac A&amp;P   <input type="checkbox"/> Angina S/S  <input type="checkbox"/> Sexuality</p> <p>Target goal:  Complete cessation of tobacco use</p>	<p>(Check all that apply)      Date</p> <p><b>PSYCHOSOCIAL      Initial Assessment</b></p> <p><b>Psychological Test:</b>  Tool used:                                  Score:</p> <p>Stages of change: <input type="checkbox"/> Pre-contemplation   <input type="checkbox"/> Contemplation   <input type="checkbox"/> Preparation  <input type="checkbox"/> Action   <input type="checkbox"/> Maintenance   <input type="checkbox"/> Relapse</p> <hr/> <p style="text-align: center;"><b>Intervention</b></p> <p><input type="checkbox"/> Psych consult      <input type="checkbox"/> Physician referral</p> <p>Psychotropic meds:</p> <p><input type="checkbox"/> Stress management class  <input type="checkbox"/> Uses stress management skills</p> <p><b>Education:</b>  <input type="checkbox"/> Coping techniques      <input type="checkbox"/> S/S depression  <input type="checkbox"/> Relaxation techniques</p> <p><b>Target goal:</b>  Assess presence or absence of depression using a valid screening tool  Maximize coping skills  Positive support system</p> <p>Preventive medication:  <input type="checkbox"/> Aspirin   <input type="checkbox"/> Clopidogrel   <input type="checkbox"/> Beta blockade  <input type="checkbox"/> Ace inhibitor   <input type="checkbox"/> Statin or other lipid lowering agent</p> <p>Fall risk assessed:   <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>Assistive device:   <input type="checkbox"/> Cane      <input type="checkbox"/> Walker  <input type="checkbox"/> Wheelchair   <input type="checkbox"/> Gait belt</p>
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PHYSICIAN: \_\_\_\_\_ Date: \_\_\_\_\_



**PATIENT INFORMATION**

MRUN

NAME

DOB/GENDER

**CARDIAC REHABILITATION NOTE**

**APPENDIX D**

COUNTY OF LOS ANGELES RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER DEPARTMENT OF HEALTH SERVICES

**CARDIAC REHABILITATION INDIVIDUAL TREATMENT PLAN**

<p>(Check all that apply)      Date</p> <p><b>EXERCISE:                    Re- Assessment</b></p> <p>Stages of change: <input type="checkbox"/> Pre-contemplation   <input type="checkbox"/> Contemplation   <input type="checkbox"/> Preparation  <input type="checkbox"/> Action   <input type="checkbox"/> Maintenance   <input type="checkbox"/> Relapse</p> <hr/> <p style="text-align: center;"><b>Exercise Prescription</b></p> <p>Mode: <input type="checkbox"/> TM   <input type="checkbox"/> Leg erg   <input type="checkbox"/> Arm erg   <input type="checkbox"/> 4 ext erg   <input type="checkbox"/> Nstp  Freq:                    Dur:                    Intensity :  Progression :                    THR:  <input type="checkbox"/> Angina with ex.  <input type="checkbox"/> Resistance ex    Wt#:                    Reps :  Current BP:                    <input type="checkbox"/> Med change</p> <hr/> <p style="text-align: center;"><b>Intervention</b></p> <p>Home ex: Type :                    Freq:                    Dur :  <input type="checkbox"/> Resistance ex</p> <p><b>Education:</b> <input type="checkbox"/> Self pulse   <input type="checkbox"/> Wm-up/cl-dn   <input type="checkbox"/> Low Na diet  <input type="checkbox"/> Understanding BP   <input type="checkbox"/> RPE scale   <input type="checkbox"/> Ex safety  <input type="checkbox"/> BP meds   <input type="checkbox"/> Physical activity   <input type="checkbox"/> Equip orient  <input type="checkbox"/> S/S to report</p> <p><b>Target Goals:</b>  Individual exercise Rx  BP&lt;140/90 or &lt; 130/80 if DM or CKD  Aerobic activity 30+min 5 days/week</p>	<p>(Check all that apply)      Date</p> <p><b>NUTRITION                    Re-Assessment</b></p> <p>Stages of change: <input type="checkbox"/> Pre-contemplation   <input type="checkbox"/> Contemplation   <input type="checkbox"/> Preparation  <input type="checkbox"/> Action   <input type="checkbox"/> Maintenance   <input type="checkbox"/> Relapse</p> <p>Lipids: Total chol:                    HDL:                    LDL:                    Trig:  <input type="checkbox"/> Med change</p> <p>Diabetes: FBS:                    HbA1c:  <input type="checkbox"/> Med change    Random BS    <input type="checkbox"/> BS in range</p> <hr/> <p style="text-align: center;"><b>Weight Management</b></p> <p>Current wt:  Wt goal:</p> <hr/> <p style="text-align: center;"><b>Intervention</b></p> <p><input type="checkbox"/> Dietician consult                    <input type="checkbox"/> Nurse/patient discussion  Dietary goal  <input type="checkbox"/> Diet class</p> <p><b>Target Goal:</b>  LDL-C&lt;100 if triglycerides are &gt; 200  Non-HDL-C should be &lt;130  LDL-C&lt;70 for high risk patients  HbA1c&lt;7%  BMI&lt;25    Waist circ &lt;40in M/&lt;35 in F</p>
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**PATIENT INFORMATION**

MRUN

NAME

DOB/GENDER

**CARDIAC REHABILITATION NOTE**



**APPENDIX E**

COUNTY OF LOS ANGELES RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER DEPARTMENT OF HEALTH SERVICES  
**CARDIAC REHABILITATION INDIVIDUAL TREATMENT PLAN**

(Check all that apply) Date

**EXERCISE: Follow-up/Discharge**

Stages of change:  Pre-contemplation  Contemplation  Preparation  
 Action  Maintenance  Relapse

6 MWT  Stress test  Other

Walked ft. Max HR

RPE: SPO<sub>2</sub>: MET level:

-----

**Exercise Prescription**

Mode:  TM  Leg erg  Arm erg  4 ext erg  Nstp

Freq: Dur: Intensity:

Progression: THR:

Angina with ex.

Resistance ex Wt#: Reps:

**Hypertension:**  No  Yes

**Blood Pressure:** Rest: Peak ex

Meds:

-----

**Intervention**

**Home ex:** Type: Freq: Dur:  
 Resistance ex

**Education:**  Self pulse  Wm-up/cl-dn  Low Na diet  
 Understanding BP  RPE scale  Ex safety  
 BP meds  Physical activity  Equip orient  
 S/S to report

**Target Goals:**  
Individual exercise Rx  
BP<140/90 or < 130/80 if DM or CKD  
Aerobic activity 30+min 5 days/week

(Check all that apply) Date

**NUTRITION Follow-up/Discharge**

Stages of change:  Pre-contemplation  Contemplation  Preparation  
 Action  Maintenance  Relapse

Lipids: Total chol: HDL: LDL: Trig:

Med change

Diabetes: FBS: HbA1c:  
 Med change Random BS  BS in range

-----

**Weight Management**

Wt: Ht: BMI: %Fat: Waist circ:

Wt goal:

Alcohol:  Daily  Weekly  Special  None  
Type: Amount:

Diet assess tool: Score:

Special diet:

-----

**Intervention**

Dietician consult  Nurse/patient discussion

Dietary goal  
 Diet class  Referred to Diabetes education  
 Referred to lipid clinic  Referred to wt mgt class

Education:  S&S hypo/hyperglycemia  Eating healthy  
 Relate Diabetes

**Target Goal:**  
LDL-C<100 if triglycerides are > 200  
Non-HDL-C should be <130  
LDL-C<70 for high risk patients  
HbA1c<7%  
BMI<25 Waist circ <40in M/<35 in F



PATIENT INFORMATION

MRUN

NAME

DOB/GENDER

**APPENDIX E**

COUNTY OF LOS ANGELES

DEPARTMENT OF HEALTH SERVICES

RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER

**CARDIAC REHABILITATION INDIVIDUAL TREATMENT PLAN**

<p>(Check all that apply)      Date</p> <p><b>EDUCATION:      Follow-up/Discharge</b></p> <p>Learning barriers: <input type="checkbox"/> Speech   <input type="checkbox"/> Hearing   <input type="checkbox"/> Vision  <input type="checkbox"/> Literacy   <input type="checkbox"/> Cognitive   <input type="checkbox"/> Ready to learn</p> <p>Knowledge test score:</p> <p>Stages of change: <input type="checkbox"/> Pre-contemplation   <input type="checkbox"/> Contemplation   <input type="checkbox"/> Preparation  <input type="checkbox"/> Action   <input type="checkbox"/> Maintenance   <input type="checkbox"/> Relapse</p> <p><input type="checkbox"/> Family support</p> <p><b>Tobacco Use:</b> <input type="checkbox"/> Yes   <input type="checkbox"/> No  <input type="checkbox"/> Quit &lt; 6 months   <input type="checkbox"/> Qui t&gt; 6 months</p> <p>Date started:</p> <p>Date quit:</p> <p>Quit date set:</p> <p># cigarettes smoked per day:</p> <p><input type="checkbox"/> Smokeless tobacco      amount :</p> <hr/> <p style="text-align: center;"><b>Intervention</b></p> <p><input type="checkbox"/> Referred to smoking cessation class  <input type="checkbox"/> Individual education and counseling  <input type="checkbox"/> Tobacco adjunct  <input type="checkbox"/> Education class schedule given</p> <p><b>Education:</b> <input type="checkbox"/> Tobacco triggers   <input type="checkbox"/> CAD   <input type="checkbox"/> Risk factors  <input type="checkbox"/> Med compliance   <input type="checkbox"/> Cardiac A&amp;P   <input type="checkbox"/> Angina S/S  <input type="checkbox"/> Sexuality</p> <p>Target goal:  Complete cessation of tobacco use</p>	<p>(Check all that apply)      Date</p> <p><b>PSYCHOSOCIAL      Follow-up/Discharge</b></p> <p><b>Psychological Test:</b></p> <p>Tool used:                                  Score:</p> <p>Stages of change: <input type="checkbox"/> Pre-contemplation   <input type="checkbox"/> Contemplation   <input type="checkbox"/> Preparation  <input type="checkbox"/> Action   <input type="checkbox"/> Maintenance   <input type="checkbox"/> Relapse</p> <hr/> <p style="text-align: center;"><b>Intervention</b></p> <p><input type="checkbox"/> Psych consult      <input type="checkbox"/> Physician referral</p> <p>Psychotropic meds:</p> <p><input type="checkbox"/> Stress management class  <input type="checkbox"/> Uses stress management skills</p> <p><b>Education:</b></p> <p><input type="checkbox"/> Coping techniques                  ] S/S depression  <input type="checkbox"/> Relaxation techniques</p> <p><b>Target goal:</b>  Assess presence or absence of depression using a valid screening tool  Maximize coping skills  Positive support system</p> <p>Preventive medication:  <input type="checkbox"/> Aspirin   <input type="checkbox"/> Clopidogrel   <input type="checkbox"/> Beta blockade  <input type="checkbox"/> Ace inhibitor   <input type="checkbox"/> Statin or other lipid lowering agent</p> <p>Fall risk assessed: <input type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>Assistive device: <input type="checkbox"/> Cane      <input type="checkbox"/> Walker  <input type="checkbox"/> Wheelchair   <input type="checkbox"/> Gait belt</p>
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PHYSICIAN: \_\_\_\_\_ Date: \_\_\_\_\_



**PATIENT INFORMATION**

MR UN

NAME

DOB/GENDER

**CARDIAC REHABILITATION NOTE**

**APPENDIX F**

**RANCHO LOS AMIGOS NATIONAL REHABILITATION CENTER  
CARDIAC REHABILITATION PROGRAM  
INITIAL INDIVIDUAL COMPETENCY VALIDATION**

**EMPLOYEE:**

**TITLE:**

**DATE:**

COMPETENCY	REVIEW VALIDATION		AGE GROUP SERVED	SELECTION CRITERIA	METHOD OF VALIDATION
	Initial	Date			
Arrhythmia Recognition			Young Adult Middle Adult Older Adult	High Risk	
Versacare Telemetry Monitor			Young Adult Middle Adult Older Adult	High Risk	
Defibrillator/AED			Young Adult Middle Adult Older Adult	High Risk	
Recognize signs and symptoms of exercise intolerance			Young Adult Middle Adult Older Adult	High Risk	
Patient assessment prior to exercise			Young Adult Middle Adult Older Adult	High Risk	
Basic heart and lung sounds			Young Adult Middle Adult Older Adult	High Risk	
Signs and symptoms of heart failure			Young Adult Middle Adult Older Adult	High Risk	
Signs and symptoms of myocardial ischemia			Young Adult Middle Adult Older Adult	High Risk	
Exercise equipment			Young Adult Middle Adult Older Adult	High Risk	

Physician: \_\_\_\_\_ Date: \_\_\_\_\_

**APPENDIX F**

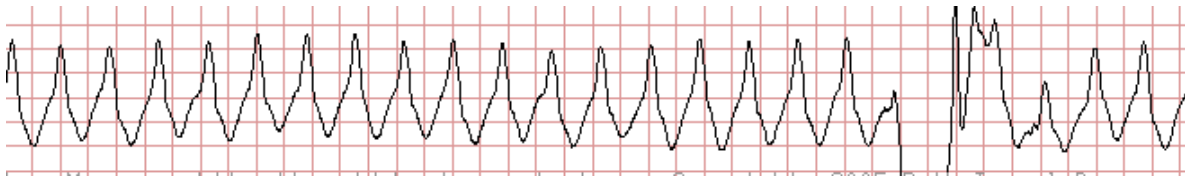
**TELEMETRY MONITORING  
Self-Assessment Quiz Answers**

1.



**What is the rhythm? Normal Sinus Rhythm**

2.



**What rhythm? Ventricular Tachycardia**

**is the**

3.



**What is the rhythm? Sinus Tachycardia**

4.



**What is the rhythm? 2<sup>nd</sup> Degree AV Block Type I (Wenckebach)**

5.



**What is the rhythm? Junctional Rhythm**

**APPENDIX F**

6.



**What is the rhythm? 3<sup>rd</sup> Degree AV Block**

7.



**What is the rhythm? Atrial Flutter with variable block**

8.



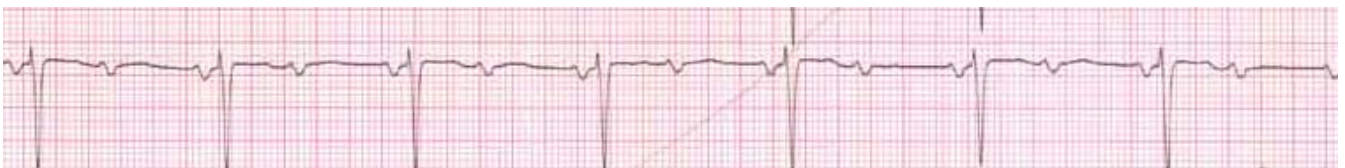
**What is the rhythm? Non-conducted Premature Atrial Contractions (PACs)**

9.



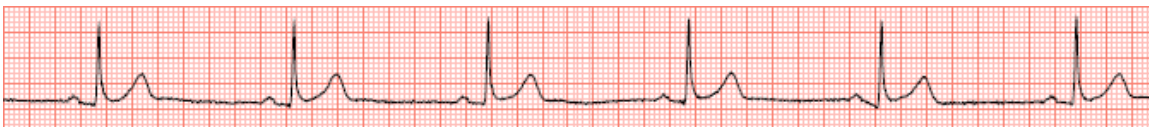
**What is the rhythm? Accelerated Idioventricular Rhythm**

10.



**What is the rhythm? 2<sup>nd</sup> Degree AV Block Type 2**

11.

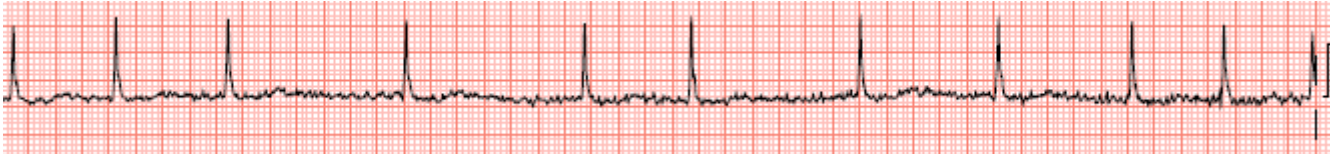


**What is the rhythm? Sinus Bradycardia**



**APPENDIX F**

12.



**What is the rhythm? Atrial Fibrillation**

13.



**What is the rhythm? Premature Atrial Contractions (PACs)**

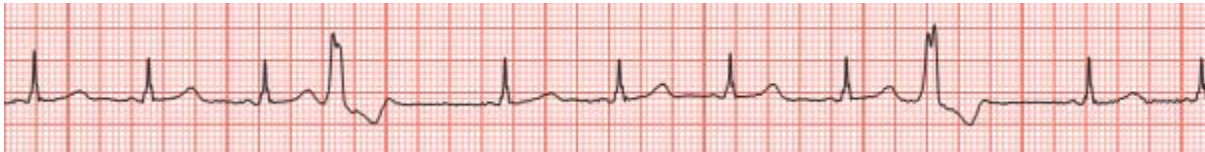
**What**

14.



**What is the rhythm? Sinus Rhythm with 1<sup>st</sup> Degree AV Block**

15.



**What is the rhythm? Premature Ventricular Contractions (PVCs)**

**APPENDIX F**

Rancho Los Amigos National Rehabilitation Center

**SPECIFIC CLINICAL COMPETENCY: VERSACARE TELEMETRY MONITOR**

Employee Name: \_\_\_\_\_

Job Title: \_\_\_\_\_

Employee has demonstrated "basic competence" for the management of the patient in the following areas:

<b>Topic/Skill</b>	<b>Date</b>	<b>Instructor</b>
<b>USING THE VERSACARE TELEMETRY MONITOR</b>		
1. Proper electrode placement		
2. Assigning patient to a channel		
3. Starting the ECG display		
4. Recording the ECG display		
5. Saving/printing ECG strips		
6. Marking additional ECG strips		
7. Editing report strip information		
8. Printing reports		
<b>RHYTHM IDENTIFICATION: MUST BE ABLE TO ID THE FOLLOWING</b>		
1. Sinus rhythms (normal, bradycardia and tachycardia)		
2. Atrial rhythms (PACs, atrial fibrillation and atrial flutter)		
3. Atrioventricular node blocks (1 <sup>st</sup> degree, 2 <sup>nd</sup> degree type I & 2 and 3 <sup>rd</sup> degree)		
4. Junctional rhythms (premature and escape)		
5. Ventricular rhythms (PVCs, escape/idioventricular and ventricular tachycardia)		

"Basic competence" refers to the demonstration of basic skills required to safely and effectively complete assigned duties without immediate supervision. Additionally, the employee has demonstrated that they have identified areas where additional supervision and training are required and that they are appropriately able to address these areas by accessing resources (e.g. physician, mentor, senior staff, supervisor, scientific literature, peers).

Employee Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Supervisor/Instructor Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Submit Completed form to be filed in employee personnel and/or education file.

## APPENDIX G

**POLICY AND PROCEDURE MANUAL  
PHARMACY SERVICES**

CODE: 1.21.0  
DATE: 7/1/92  
REVISED: 6/21/04, 11/28/05, 6/11/08,  
8/18/2009, 11/22/11, 1/24/12  
APPROVED: Brian Joyo, Pharm. D.  
MEC APPROVED: 12/14/11, 2/22/12  
PAGES: 1 of 2

SECTION: **PHARMACY SERVICES**

SUBJECT: **CRASH CART & EMERGENCY TRAY**

### POLICY

The emergency drug list is the drugs listed in the emergency cart. Emergency drugs approved by the medical staff, are in adequate and proper supply in the pharmacy and in designated hospital areas. The pharmacist is responsible only for the drug contents (adult and pediatric) for the crash cart. Attached are the lists of the drugs for both the Adult and Pediatric crash carts.

The crash carts and the dates of the earliest expiration date are checked no less frequently than every 30 days by a pharmacist and recorded on the Medication Area Inspection Record (unit/inspection record). The original inspection records are kept in the pharmacy for at least three years.

### PROCEDURE

Nursing Personnel are responsible to ensure crash carts are fully restocked after a Code Blue for crash carts placed in nursing units. Pharmacy is responsible to assure that the emergency medications are replenished, and the crash cart is checked, and sealed by a pharmacist.

Within one hour after notification, pharmacy personnel are responsible for exchanging the crash cart during normal business hours. Note: Nursing personnel will pick up the crash cart from Pharmacy after business hours, on holidays, and weekends.

[Areas where Pediatric trays are also located are **bold-faced**]

Patient Areas - Echo Lab; Medical Imaging; Medical Science - Room 9; **Nuclear Medicine**; PAR (2); Special Procedures; **CART**; Clinics - **Central I**; **Central II**; Comarr; **Dental**; Urology. Therapy Areas - JPI Building (1<sup>st</sup> floor; 2<sup>nd</sup> floor; 3<sup>rd</sup> floor).

[Areas where Pediatric trays are also located are **bold-faced**]

Patient Units - **1S, 1N, 2S, 2N, 3S, 3N, 101 (2), 102, 902, 903, 904, and 905**

The inpatient pharmacy will be responsible for replenishing the emergency drugs. A pharmacy technician will fill the drugs according to the approved drug list and a pharmacist will check the drugs to make certain nothing has been omitted and that all drugs are in date and note the earliest drug to expire and the expiration date. [Note: All departments contributing to the crash cart will have a first date to expire (FDTE) label or sheet for their respective drug(s)/supply and include the drug/supply and expiration date on the label or sheet. A first to expire drug/supply and expiration date label will be made, sent with the crash cart, and placed on the respective medication list(s) attached to the I.V. pole of the crash cart.

Note: This date indicates the earliest expiration of any drug/supply in the cart. Pharmacist will initial upon completion.

**POLICY AND PROCEDURE MANUAL  
PHARMACY SERVICES**

CODE: 1.21.0  
DATE: 7/1/92  
REVISED: 6/21/04, 11/28/05, 6/11/08,

SECTION: **PHARMACY SERVICES**

8/18/2009, 11/22/11, 1/24/12  
APPROVED: Brian Joyo, Pharm. D.  
MEC APPROVED: 12/14/11, 2/22/12  
PAGES: 2 of 2

SUBJECT: **CRASH CART & EMERGENCY TRAY**

To validate that the crash carts and crash cart trays are filled correctly, a pharmacy supervisor will randomly check 3 crash carts, 3 adult crash cart trays, and 2 pediatric crash cart trays a month to assure that the contents and the first date to expire label(s) are accurate. If the contents or the first date to expire label(s) are not accurate, the pharmacy supervisor will notify the respective department or pharmacist, take corrective measures, and report the error into the Patient Safety Network (PSN).

## APPENDIX H



**Rancho Los Amigos National Rehabilitation Center  
DEPARTMENT OF NURSING  
CLINICAL  
POLICY AND PROCEDURE**

**SUBJECT: DEFIBRILLATION WITH  
MULTI-FUNCTION ELECTRODES**

**Policy No.: C111.12  
Effective Date: 05/1994  
Page: 1 of 2**

**Purpose of Procedure:** To provide a standardized process for the use of the defibrillator/AED with multi-function electrodes to eradicate life-threatening dysrhythmias.

**Physician's Order Required:** Yes, except in the event of an emergency/code blue situation.

**Performed by:** MD, RN (under the direction of a physician, or independently if ACLS/PALS trained) and employees who have been trained in the use of an AED (for emergency code blue response) -

**Policy Statement:** In preparation for use, the multi-function cables are attached to the defibrillator at all times.

**Equipment:** Crash Cart, Defibrillator/AED, Multi-Function Electrodes

**Procedural Steps:**

- I. Electrode Placement: Use the electrode placement pattern that allows the defibrillator to be used for monitoring, defibrillation and external pacing
  - A. Select the appropriate size electrodes:
    1. Pediatric pads – recommended for patients 15 kg (approximately 4 years) or less
    2. Adult pads – all other patients
  - B. When opening the package, check to be sure gel is moist. Do not use if dry.
  - C. Place the electrodes on the patient – as directed on the package diagram.

**KEY POINT:**

    1. Avoid placing pads over nipples and permanent pacemaker devices.
    2. To ensure good skin contact, gently press the gel area to remove any trapped air.
- II. Defibrillation with an AED
  - A. Turn on monitor.
  - B. Attach electrode connector to multi-function cable of the defibrillator/AED.
  - C. Follow the verbal instructions from the AED.
  - D. The AED will determine the patient's cardiac rhythm and will advise to "shock," if appropriate.
  - E. State "Stand Clear" and visually verify that all personnel are clear of contact with the patient and the bed; and that the bag-valve-mask device is removed from the bed.
  - F. Press the shock button and follow further instructions.
- III. Defibrillation without an AED
  - A. Turn the selector to "ON" position and select desired joules according to Physician/ACLS guidelines.
  - B. Charge the defibrillator, pressing "CHARGE" button on the front panel.

**KEY POINT:** After four to ten seconds, the charge indicator light will illuminate, the CHARGE READY TONE will sound and the monitor will display the amount of joules.
  - C. State "Stand Clear" and visually verify that all personnel are clear of contact with the patient and the bed; and that the bag-valve-mask device is removed from the bed.

APPROVED BY: Nursing Executive Council

COUNTY OF LOS ANGELES • DEPARTMENT OF HEALTH SERVICES

**APPENDIX I**



**Rancho Los Amigos National Rehabilitation Center  
ADMINISTRATIVE POLICY AND PROCEDURE**

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**SUBJECT: MEDICAL EMERGENCY RESPONSE:  
CODE BLUE, CODE WHITE, RAPID  
RESPONSE, CODE ASSIST**

**Policy No.: B812  
Supersedes: May 3, 2019  
Revision Date: October 10, 2020  
Page: 1 of 15**

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**POLICY:**

The medical center maintains an effective and efficient medical emergency response system throughout the campus. This function is accomplished through an interdisciplinary CPR Committee which reports to the Critical Care Committee of the Medical Staff. All policies and procedures regarding medical emergency response within the medical center are approved and administered by the Critical Care Committee.

The Critical Care Committee is responsible for ensuring that Rancho Los Amigos emergency response plan is aligned with other relevant policies and procedures within the medical center and DHS, that care is provided based on national standards in emergency care with the appropriate equipment.

**PURPOSE:**

To assist staff in recognizing patient signs and symptoms which may indicate deterioration in patient's clinical condition and to identify the need to call a code blue, code white, rapid response, or code assist. The code blue procedure is for adult victims of cardiopulmonary arrest, the code white procedure is for pediatric victims of cardiopulmonary arrest. The Rapid Response Team procedure is for In-patients and the Code Assist is for outpatients who are deteriorating clinically (Attachment E).

**I. GENERAL SYSTEM SUPPORT**

**A. Education/Training of Hospital Staff**

1. It is strongly recommended that licensed members of the code team (Physician, Licensed Independent Practitioner, RN, and RCP) maintain ACLS and PALS certification.
2. Training and competency of staff are the responsibility of each department.

**B. Equipment and Supplies**

1. Emergency Response Kit
  - a. An emergency response kit will be stored in the ICU medication room.
  - b. If the kit is used or supplies/medications are expiring, the medication kit will be exchanged at the Inpatient Pharmacy for a new kit.

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**EFFECTIVE DATE:** January 1, 1991

COUNTY OF LOS ANGELES • DEPARTMENT OF HEALTH SERVICES

**APPROVED BY:** Signature on File

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APPENDIX I

SUBJECT: CODE BLUE/RAPID RESPONSE/CODE ASSIST

Policy No.: B812  
Supersedes: July 22, 2020  
Page: 2 of 15

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- c. Each department that contributes to the replenishment of the emergency response kit (Nursing, Pharmacy) will be responsible to complete the respective Emergency Response Kit list (Attachments A, B and C).
  - d. A pharmacist will check the kit according to Attachment A, seal the kit and place the first date to expire label on the outside content list.
2. Crash Carts
- a. Crash carts are located in strategic locations throughout the medical center where qualified staff are available to operate and maintain the equipment (Attachment F).
  - b. Depending on the location of the cart, departments are assigned responsibility for maintaining the cart with daily cart checks to ensure:
    - Contents are complete, functional, and within expiration dates.
    - Routine cleaning and maintenance are consistent with infection control procedures.
    - External checks are documented by staff daily and internal checks are completed bi-monthly.

**Exception:** ICU and PCU will complete and document external crash cart checks every shift.
  - c. After the use of the crash cart, the departments will be responsible for obtaining a crash cart replacement from the pharmacy within one hour. Unused supplies and medications will be returned to the appropriate areas. Refer to policy B869- Routine Cleaning and Crash Cart exchange.
  - d. Regular maintenance and electrical checks of the cart and related equipment, such as the defibrillator or AED, will be done by the Biomedical Engineering department staff.
  - e. The hospital CPR Committee will plan for the overall replacement of reusable equipment on the carts and submit formal budget requests to the Critical Care Committee for approval and inclusion in the annual Fixed Assets process.
  - f. If any changes are needed to the crash cart contents, recommendations will be submitted to the Critical Care Committee. This review will ensure compatibility with other equipment, community standards in emergency care, and compliance with other policies and procedures within the medical center.
3. In addition to the code team, staff will respond with a crash cart as assigned in attachment G

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## APPENDIX I

**SUBJECT: CODE BLUE/RAPID RESPONSE/CODE ASSIST**

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### II. CODE BLUE/CODE WHITE RESPONSE PROCEDURE

- A. If an ACLS certified RN is present, he/she may initiate interventions according to current American Heart Association (AHA) Advanced Cardiac Life Support (ACLS) algorithms until the physician arrives – refer to Attachment D – Standardized Procedure: ACLS RN Functions.
- B. Pediatric Patients:
  1. All in-patients 13 years old and below and all pediatric patients between the ages of 14 and 21 years old who weigh 50kg or less will have a completed Pediatric Emergency Drug Dosing Sheet in the patient's chart.
  2. The admitting nurse generates the form and places it in the chart.
  3. A code white is to be called for pediatric patients (0-17 years) in cardiac arrest
  4. When a CODE WHITE is needed, the medical center operator will be called by dialing 544
  5. The reporting staff member will provide the operator with the exact location of the code.
  6. The Pediatric Emergency Drug Dosing Sheet will be reviewed and updated monthly if needed unless the child is undergoing a growth period warranting more frequent updating per physician order.
  7. The Pediatric Emergency Drug Dosing Sheet is used as the primary dosing guide during a code white and the Broselow tape is used as the secondary guide, if needed.
- C. When a CODE BLUE is needed, the code blue button will be activated if available or the medical center operator is to be called by dialing 544.
- D. Basic Life Support will be provided by the first available trained employee(s).
- E. Employees who have been trained to use an AED should activate the AED and follow the instructions, including shocking the patient if indicated.
- F. The operator will overhead page the code blue/white response team with information as listed above. The overhead page will be preceded by a distinctive audible warning tone.
- G. If the intercom system is down, the operator will contact the responding nursing units via telephone to ensure timely response with emergency equipment.
- H. The Code Blue team will minimally consist of the following:
  1. Department of Medicine:
    - a. Intensivist
    - b. Pediatrician for Code White
  2. Department of Nursing:
    - a. Area staff nurses as assigned
    - b. Intensive Care Unit Registered Nurse
    - c. Administrative Nursing Supervisor
    - d. Transport team member (when available)

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3. Respiratory Therapy Department

a. RCP

4. Medical Center Police

**Key Point:** Code Team will respond to all in-patient areas.  
Code Team and Paramedics will respond for visitors and employees.  
In the event an actual or suspected traumatic injury occurs, the code team will respond as well as the paramedics for employees, visitors or patients.

**RAPID RESPONSE AND CODE ASSIST RESPONSE PROCEDURES**

Early warning signs that the Patient’s condition may be deteriorating include but are not limited to:

- Acute change in vital signs (pulse, blood pressure, respiratory rate)
- Acute drop in blood oxygen level (O2 Saturation)
- Acute change in mental function (level of consciousness)
- Any staff member’s significant concern about a patient’s clinical status
- Severe, uncontrolled bleeding
- In pediatric patients under 5 years of age hypo-perfusion often presents with altered mental status, the patient feels clammy and he/she has capillary refill > 3 seconds. Blood pressure may be difficult to obtain

Age-specific vital sign parameters are summarized in the table below and the Rapid Response Team (RRT) or Code Assist should be activated for **acute** changes:

Age	Heart Rate	Respiratory Rate	Systolic Blood Pressure	Oxygen Saturation
Adult	Less than 40 More than 130	Less than 8 More than 28	Less than 90	Less than 90%*
Pre-teen/Adolescent (over 10 years)	Less than 60 More than 120	Less than 10 More than 25	Less than 90 More than 140	Less than 94%†
School Age (6-10 years)	Less than 60 More than 120	Less than 10 More than 25	Less than 80 More than 120	
Toddler/Preschooler (1-5 years)	Less than 60 More than 160	Less than 14 More than 30	Less than 90 More than 110	
Infant (0-1 years)	Less than 90 More than 160	Less than 30 More than 50	Less than 70 More than 100	Less than 94%

\* Despite oxygen.

† Despite supplemental oxygen therapy or the patient requires a non-rebreather mask.



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**Role of the Rapid Response/Code Assist Team:**

- Assess
- Stabilize
- Assist with communication
- Educate and support
- Assist with transfer, if necessary

**Note:** The Rapid Response/Code Assist Teams are not intended to take the place of the Code Blue Team or urgent/stat consultations. Refer to attachment E for details on team members and equipment.

1. When a medical, nursing, or other clinical staff identifies an person whose clinical condition may be deteriorating, they will activate a Rapid Response or a Code Assist by dialing 544:
2. Rapid Response is reserved for in-patients and a Code Assist may be called for outpatients, visitors, and staff.
  - a. The caller will indicate to the operator that it is a Rapid Response or Code Assist and the specific location will be provided. The caller will also indicate if the victim is a pediatric patient.
  - b. The telephone operator will announce the Rapid Response or Code Assist and the specific location using the overhead page system. The operator will also indicate if the victim is a pediatric patient in the announcement.
  - c. If the in-patient is in a location other than the assigned unit, the primary physician/licensed independent practitioner and assigned RN will respond to the location. The RN or designee will bring the patient's medical record.
3. If the patient's primary physician is present, following the assessment of the patient's condition, the primary physician in collaboration with the Rapid Response or Code Assist Team will decide who is responsible for further patient care.
4. If the patient's primary physician is not present, the Rapid Response physician or Code Assist team will make the decision as to who will be responsible for further patient care.

**DOCUMENTATION:**

The provider will document the occurrence, assessment, and actions taken in the medical record.

An RN will document the event details on the Rapid Response CPR Report form and will complete the appropriate evaluation and debriefing form.

The RN recorder will secure all rhythm strips and will ensure they are filed in the patient's medical record with the Rapid Response CPR Report form.

The evaluation and the Rapid Response CPR Report forms can be found on each crash cart. They are also available in the Rancho Intranet and can be printed for use.

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**III. MONITORING AND EVALUATION**

- A. All codes will be logged by the medical center operator on duty including date, time, and exact location. This log will be maintained by the medical center operator for one year.
- B. A copy of this log will be sent to the Director, Quality Resource Management/Risk Management on a monthly basis.
- C. The hospital Critical Care Committee will provide monitoring and evaluation of code response effectiveness.
- D. Each department with Code Response responsibilities may choose to evaluate their department's Code Response effectiveness. This evaluation should be shared with the hospital's CPR and Critical Care Committees.
- E. The Critical Care Committee will be notified of ongoing concerns and request for policy or procedural changes.

Approved by Critical Care Committee

Revised 07/09 Olivia Fortuno, RN

Revised 06/13

Reviewed 08/16

Revised 07/2017

Revised 12/2017 – Combined Policies B812 and B812.1

Revised 5/2019

Revised 2/2020

Attachments:

Attachment A –Emergency Response Kit – Medications

Attachment B –Emergency Response Kit – Checklist

Attachment C – Emergency Response Kit – Equipment Log

Attachment D – Standardized Procedure ACLS Registered Nurse Functions

Attachment E – Rapid Response/Code Assist Team vs. Code Blue Team

Attachment F – Crash Cart Locations

Attachment G – Medical Emergency Response

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Attachment A

**EMERGENCY RESPONSE MEDICATIONS LIST**

Box 1 Content				Box 2 Content			
Medication	Date	Initial	Exp. Date	Medication	Date	Initial	Exp. Date
Albuterol 2.5mg/3mL (3)				Atropine 1mg/10mL Prefilled Syringe (1)			
Chewable Aspirin 81mg Tab (4)				Dextrose 50% 50mL, 25gm/50mL (1)			
Diphenhydramine (Benadryl) 50mg/mL (1)				Epinephrine 1mg/10mL Prefilled Syringe (2)			
Diphenhydramine [Benadryl] 25mg/10mL UD Liq Cup (2)				Epinephrine Auto-Injector 0.3mg [Epi Pen] (2)			
Epinephrine Auto-Injector 0.15mg [Epi Pen Jr] (2)				Glucagon Inj. Kit 1mg (1)			
Flumazenil 0.5mg/5mL Inj. (2)				Labetalol Inj. 20mg/4mL (1)			
Ipratropium 0.5mg/2.5mL (3)				LORazepam [Ativan] 2mg/mL [WestWard ONLY] (2)			
Metoprolol Inj. 5mg/5mL (2)				Lubricating Jelly (1)			
Midazolam [Versed] Inj. 5mg/5mL (2)				MethlylPREDNiSolone [SOLU-Medrol] 125mg (1)			
Naloxone 0.4mg/mL (3)				Norepinephrine 4mg/4mL (1 vial)			
Nitroglycerin 0.4mg tab (1 bottle)				Oral Glucose Gel 15gm/tube (1)			
0.9% NaCl 10mL Flushes (4)							
0.9% NaCl 500mL (1)*							
<b>FDTE Label</b>				Date	Pharmacist Signature/Comments		

Note: \* → located outside Box 1

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Attachment B

**EMERGENCY RESPONSE KIT - CHECK LIST**

YEAR \_\_\_\_\_ UNIT \_\_\_\_\_

(Retain this form for one year)

- INSTRUCTIONS:**
1. Complete external lock check every shift.
  2. If the lock # is different from the lock # written on the FDTE label, exchange for a new medication kit at pharmacy. Ensure notation is completed in comment section.
  3. Report broken or replace missing equipment as needed and make a notation in comment section.
  4. For outdated medications, exchange for a new medication kit at pharmacy.
  5. Signature need only appear once in the signature column.

	1		2		3		4	
Date	NOC	DAY	NOC	DAY	NOC	DAY	NOC	DAY
Time								
Lock on kit (place number in box)								
First date of expired item								
<b>Initials</b>								

	5		6		7	
Date	NOC	DAY	NOC	DAY	NOC	DAY
Time						
Lock on kit (place number in box)						
First date of expiration						
<b>Initials</b>						

Initial	Signature	Initial	Signature	Initial	Signature

**Comments:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

12/2012, 5/2019

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Attachment C

**EMERGENCY RESPONSE KIT EQUIPMENT LOG**

**Instructions:**

1. Check contents on the 15<sup>th</sup> and 30<sup>th</sup> of every month.
2. Retain this form for one year

\*Items without an expiration date must be disposed of within 3 years from the manufacturer's date

<b>Date</b>									
LMA – Adult (Exp. Date)									
LMA – Child (Exp. Date)									
Bag-valve-mask Adult (Exp. Date)									
Bag-valve-mask Child (Exp. Date)									
Angio Catheters #20g (2) #22g (2) (Exp. Date)									
10mL Syringes (2)									
Needles #18 g (2) #21g (1) #20 g (2) (Exp. Date)									
IV Start Kit (2) (Exp. Date)									
Extension Set (1) (Exp. Date)									
Alcohol Wipes (10)									
EZIO Kit – Needle Set (Exp. Date)									
EZIO Kit – EZ – Stabilizer (Exp. Date)									
Gloves									
Pen light									
AAA Batteries									
Primary tubing (Exp. Date)									
Blood Pressure Cuff									
Stethoscope									
Lab Tubes (First to expire)									
4X4s (First to expire)									
Initials									
<b>Comments:</b>									
<b>Initials</b>	<b>Signature/Title</b>	<b>Initials</b>	<b>Signature/Title</b>	<b>Initials</b>	<b>Signature/Title</b>	<b>Initials</b>	<b>Signature/Title</b>	<b>Initials</b>	<b>Signature/Title</b>

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Attachment D

**Standardized Procedure  
ACLS Registered Nurse (RN) Functions**

### **Purpose**

To provide prompt and effective medical care to patients in pulseless arrest or those who are quickly deteriorating.

### **Policy Statements**

This standardized procedure has been established by the Critical Care Committee for use during medical emergency response in Rancho Los Amigos National Rehabilitation Center. It is based on guidelines developed by the American Heart Association (AHA) in partnership with the International Liaison Committee on Resuscitation (ILCOR).

This standardized procedure was reviewed and approved by the Critical Care Committee, Pharmacy and Therapeutics Committee, ICU/PCU Collaborative Council, Nursing Executive Council, Medical Executive Council and the Executive Council. Reviews and revisions to the content will be conducted as needed but at a minimum of every three years.

### **ACLS RN Training and Education**

Valid California License as a Registered Nurse – Refer to Nursing Policy A325- License/Certification Verification Renewal

Current BLS Certification - proof of which will be maintained in the education folder

Current ACLS Certification – proof of which will be maintained in the education folder. ACLS RNs are evaluated and deemed competent during their ACLS recertification course every 2 years.

### **ACLS RN Functions**

The following functions by the ACLS registered nurse are limited to situations in which a physician is not present and any delay in treatment could lead to permanent damage or patient death.

If an ACLS certified RN is present, he/she may initiate interventions following the current AHA algorithms until the physician arrives.

The ACLS nurse will perform or direct others in the following:

1. High quality BLS
  2. Application of electrodes and monitor
  3. Defibrillation
  4. Establishing IV/IO access
  5. Administration of IVP cardiac medications
- Key Point:** IV infusions will be initiated under the direction of a physician

### **Records**

The CPR Rapid Response form will reflect the detailed information of the code sequence and will be placed in the medical record.

A Code Blue or a Rapid Response evaluation will be completed for each event and reviewed by the CPR committee.



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Attachment E

**Rapid Response, Code Assist Team and Code Blue Team**

	Rapid Response	Code Assist	Code Blue/Code White
<b>PURPOSE</b>	Respond to inpatients who are deteriorating clinically Early warning signs include: <ul style="list-style-type: none"> <li>• Acute change in V/S</li> <li>• Acute decrease in O2 Sat.</li> <li>• Acute change in LOC</li> <li>• Staff have significant concerns about patient's clinical status.</li> </ul>	Respond to outpatients/visitors/staff who are deteriorating clinically Early warning signs include: <ul style="list-style-type: none"> <li>• Acute change in V/S</li> <li>• Acute decrease in O2 Sat.</li> <li>• Acute change in LOC</li> <li>• Staff have significant concerns about patient's clinical status.</li> </ul>	<ul style="list-style-type: none"> <li>• Provide basic life support</li> <li>• Provide advanced cardiac life support</li> </ul>
<b>PROCEDURES</b>	Dial 544 Provide operator with location Inform the operator if it is a pediatric patient Team will: <ul style="list-style-type: none"> <li>• Assess</li> <li>• Stabilize</li> <li>• Assist with communication</li> <li>• Education and Support</li> <li>• Assist with transport if necessary</li> </ul> <b>Team will determine patient disposition as appropriate:</b> <ul style="list-style-type: none"> <li>• Admission</li> <li>• Discharge</li> <li>• Clinic follow up</li> <li>• Paramedics</li> <li>• Medical Alert Center (MAC) Transfer to ED</li> </ul>		Initiate CPR Activate the code blue button or Dial 544 Provide the operator with location Inform the operator if it is a code white – pediatric patients (0-17 years old) RN Team Leader - Directs each team member to his/her duty. Physician - directs the code response. <b>Team will determine if paramedics are needed</b>
<b>TEAM (Regular Hours) 0800-1630</b>	Intensivist ICU RN RCP ANS Unit nurses as assigned Transport <b>Note: Pediatrician for pediatric patients</b>	ICU RN ANS Area nurses as assigned Transport <b>*Intensivist is available as needed*</b> <b>Note: Pediatrician and RCP for pediatrics</b>	Intensivist ICU RN Area RN as assigned ANS RCP Transport <b>Note: Pediatrician for Code White</b>
<b>TEAM (After Hours) 1630-0800 &amp; weekends and holidays</b>	Intensivist ICU RN RCP ANS Unit nurses as assigned	ICU RN ANS Area nurses as assigned <b>*Intensivist is available as needed</b> <b>Note: Intensivist and RCP for pediatrics</b>	Intensivist ICU RN Area RN as assigned ANS RCP
<b>EQUIPMENT</b>	<b>Clinical Areas</b> Crash Cart Emergency Response Kit Glucometer <b>Non-Clinical Areas</b> Crash Cart from assigned area Emergency Response kit Glucometer Portable Defibrillator	<b>Clinical Areas</b> Crash Cart Emergency Response Kit Glucometer <b>Non-Clinical Areas</b> Emergency Response kit Glucometer Portable Defibrillator	<b>Clinical Areas</b> Crash Cart Emergency Response Kit Glucometer <b>Non-Clinical Areas</b> Crash Cart from assigned area Emergency Response kit Glucometer Portable Defibrillator

December 2017, May 2019, February 2020



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Attachment F

<b>Crash Cart Location</b>	
Unit/Area	Type
<b>JPI Building</b>	
1 North	Pediatric
1 South	Pediatric
JPI 1 <sup>st</sup> Floor Therapy Gym	Pediatric
2 North	Adult
2 South	Adult
JPI 2 <sup>nd</sup> Floor Therapy Gym	Adult
3 North	Adult
3 South	Adult
3 West (2)	Pediatric
JPI 3 <sup>rd</sup> Floor Therapy Gym	Adult
Radiology (2)	Adult
Recovery Room	Pediatric
Operating Room	Pediatric
<b>Outpatient Building</b>	
ENT	Pediatric
1 <sup>st</sup> Floor Physical Therapy	Pediatric
Urology Clinic	Pediatric
Dental Clinic	Pediatric
2 <sup>nd</sup> Floor Therapy	Pediatric
Central Clinic 1	Pediatric
Central Clinic 3	Pediatric
Cardio Diagnostics	Pediatric
<b>Non-Clinical Areas</b>	
Wellness Center	Pediatric
Support Services Building (SSB)	Pediatric

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Attachment G

**MEDICAL EMERGENCY RESPONSE**

**Area A:** All In-patient Units

**Area B:** Out-patient Building, JPI Building (non-patient care areas)

**Area C:** Outside the buildings or areas distant to patient care units (e.g. 500 Building, Warehouse, Wellness Center, SSA)

Code Blue and Rapid Response Team Members: MD, ICU RN, RCP, Area Nurses as assigned, Transport Team member and Administrative Nursing Supervisor (ANS)

**Area A**

Note: A minimum of one RN, in addition to the Code Team, will respond to each code in a patient care area. A minimum of one RN from 1 North will respond to Radiology.

<b>Area</b>	<b>Crash Cart Location</b>	<b>Back up crash cart location</b>
1 North	1 North	1 South
1 South	1 South	1 North
2 North	2 North	2 South
2 South	2 South	2 North
3 North	3 North	3 South
3 South	3 South	3 North
3 West	3 West	NA
1 <sup>st</sup> Floor Therapy	Therapy Gym	1 South
2 <sup>nd</sup> Floor Therapy	Therapy Gym	2 South
3 <sup>rd</sup> Floor Therapy	Therapy Gym	3 South
Radiology	Radiology	Radiology

**Area B**

**Key Point:** For emergencies in the office areas of the JPI building (first, second, and third floors), one RN from the South side will respond with a crash cart.

**AFTER HOURS RESPONSE:** A crash cart from the designated location for the areas assigned will be retrieved.

<b>Basement</b>		
<b>Area</b>	<b>Crash cart location</b>	<b>Backup crash cart location</b>
All basement areas	1 North	NA

In addition to the Code Team, Clinic RN will respond to each area of the OPB. Crash cart(s) as specified below.

<b>OPB First Floor</b>		
<b>Area</b>	<b>Crash cart location</b>	<b>Back up crash cart</b>
Physical Therapy	Physical Therapy	ENT Clinic
Day Rehabilitation	Physical Therapy	ENT Clinic
Occupational Therapy	Physical Therapy	ENT Clinic
Pharmacy	ENT Clinic	Physical Therapy
ENT/Ophthalmology	ENT Clinic	Physical Therapy
Audiology	ENT Clinic	Physical Therapy
Speech Therapy	Physical Therapy	ENT Clinic

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Driving Program	Physical Therapy	ENT Clinic
Café	ENT Clinic	Physical Therapy
Cashier	ENT Clinic	Physical Therapy
Conference Rooms	ENT Clinic	Physical Therapy
Gift Shop	ENT Clinic	Physical Therapy
Meditation Room	ENT Clinic	Physical Therapy
Member Services	ENT Clinic	Physical Therapy
Resource Center	ENT Clinic	Physical Therapy

**OPB Second Floor**

<b>Area</b>	<b>Crash cart location</b>	<b>Backup crash cart location</b>
Urology/Gynecology	Urology	Dental Clinic
Clinic Administration Offices	Urology	Dental Clinic
Dental Clinic	Dental Clinic	Urology
Cardiac Rehabilitation	Dental Clinic	Physical Therapy
Clinical Social Work	Dental Clinic	Physical Therapy
Occupational Therapy	Dental Clinic	Physical Therapy
Physical Therapy	Dental Clinic	Physical Therapy
Psychology	Dental Clinic	Physical Therapy
Speech Therapy	Dental Clinic	Physical Therapy
Vocational Services	Dental Clinic	Physical Therapy

**OPB Third Floor**

<b>Area</b>	<b>Crash cart location</b>	<b>Backup crash cart location</b>
Shared Offices	Cardio Diagnostics	Clinic 3
Central Clinic 1	Clinic 1	Clinic 3
Central Clinic 2	Clinic 3	Clinic 1
Central Clinic 3	Clinic 3	Cardio Diagnostics
Central Clinic 4	Clinic 1	Clinic 3
Central Clinic 5	Cardio Diagnostics	Clinic 3
Cardio Diagnostics (Cardiopulmonary)	Cardio Diagnostics	Clinic 3
Pediatric Clinic	Clinic 3	Clinic 1
Blood Draw	Clinic 3	Clinic 1
Administration Office	Clinic 1	Clinic 3
Staging Area	Clinic 1	Clinic 3

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**Area C**

**AFTER HOURS RESPONSE:**

- Nurses from 1N and 1S will bring their crash cart to the site of the emergency (Employee Health and Case Management will be inaccessible.)
- A crash cart will be brought from the designated location by a code team member when responding to areas assigned to clinic.
- For Code Assist in non-clinical areas a crash cart will not be available – Emergency response kit, glucometer, and portable defibrillator will be brought by ICU RN.

<b>Non-Clinical Areas</b>		
<b>AREA</b>	<b>Responder – RN from:</b>	<b>Crash Cart Location</b>
Parking Lot A	1 North	1 North
Parking Log B	1 North	1 North
100 building	1 South	1 South
Parking Lot C and Trailers	1 South	
ATM court yard	1 South	
Harriman Building	1 South	
500 Building and Parking lot D	1 South	
Wellness Center	Clinic	
Don Knabe Plaza	Clinic	ENT
Parking Structure	Clinic	ENT
SSB	Clinic	Service Support Building-- Room 1005
Central Utility Plant and Warehouse	Clinic	Service Support Building-- Room 1005

APPENDIX J



Rancho Los Amigos National Rehabilitation Center  
DEPARTMENT OF NURSING  
CLINICAL  
POLICY AND PROCEDURE

SUBJECT: EMERGENCY TREATMENT OF  
HYPOGLYCEMIA

Policy No.: C119.11  
Effective Date: 11/06  
Page: 1 of 3

**Purpose:** To delineate the guidelines for the treatment of hypoglycemia in both an unresponsive and alert patient.

**Physician's Order Required:** Yes

**Performed By:** RN, LVN

**Definition:**

**Hypoglycemia** is defined as a blood glucose (BG) level of less than 70 mg/dL, or when signs/symptoms of hypoglycemia are present. Signs and symptoms of hypoglycemia include:

- cool clammy skin, diaphoresis
- hunger
- irritability, sudden changes in personality
- headache, lightheadedness
- blurred vision, diplopia
- weakness, fatigue
- dizziness
- numbness, especially in lips and tongue
- slurred speech
- lack of coordination
- confusion, amnesia, dementia
- nervousness
- shakiness
- sleepiness
- anxiety

**Policy Statements:**

- A. Patients with a diagnosis of diabetes must have orders that include treatment of hypoglycemia.
- B. Some patients can have BG levels less than 50 mg/dL without symptoms due to autonomic neuropathy. Asymptomatic patients with BG levels less than 70 mg/dL should be treated for hypoglycemia.

**Procedural Steps:**

**HYPOGLYCEMIA PREVENTION GUIDELINES (70-100 mg/dL)**

- A. If BG is between 70-100 mg/dL and patient is NPO or refusing snack, notify provider to initiate or increase rate of D5 solution and recheck BG in 2 hours. If after 2 hours the BG is greater than 100mg/dL, notify provider to decrease the rate of D5 solution.
- B. If bedtime BG is between 70-100 mg/dL and patient is tolerating POs, give snack (such as half sandwich, 3 graham crackers, or 120 mL of regular or low fat milk) and recheck BG at 0300.

## APPENDIX J

SUBJECT: Emergency Treatment of Hypoglycemia

Policy No.: C119.11

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### HYPOGLYCEMIA MANAGEMENT GUIDELINES

#### BG less than 50 mg/dL

- A. Notify provider and give Dextrose 50% (50mL) slowly by IV Push

#### BG less than 70 mg/dL

- B. Notify provider and perform the following as ordered:
- 1.If BG less than 70 and patient is alert and able to tolerate PO fluids, give 120ml juice (apple, cranberry, or grape preferred)
  - 2.If BG less than 70 and patient is unresponsive, NPO, or unable to tolerate PO, give Dextrose 50% (25mL) slowly by IV Push
  - 3.If BG less than 70 and IV access is unavailable, and unable to tolerate PO fluids, give Glucagon 1mg IM
- C. Recheck finger stick in 15 minutes and every 15 minutes until BG is greater than 70 mg/dL

### FOOD SOURCE EQUIVALENTS

FOOD SOURCE EQUIVALENT TO 15 GMS CARBOHYDRATE (CHO)			
FOOD SOURCE	AMOUNT	CHO GMS	KCALS
Gelatin, regular prepared	½ C	17	71
Hard candy	5	15	50
Honey	1 T	17.3	64
Juice, apple	1/2C	14.5	5868
Juice, cranberry	1/2C	17.1	65
Juice, grape	½ C	15.5	120
Bread, white	1 slice	15	86
Milk, non-fat	1 C	12	50
Soft drink, regular	½ C	12.8	61
Sugar, granulated	4 tsp or 4 pks	15.5	100
Banana, medium	½	15	

### PATIENT EDUCATION

- A. Review with patient the signs and symptoms of hypoglycemia and the patient's own signs/symptoms at the beginning of the episode.
- B. Review with patient appropriate actions to take when signs/symptoms first occur.

### DOCUMENTATION

- A. Ensure that all finger stick BG results are uploaded in the electronic health record (EHR).
- B. Place a narrative note to include:
1. Patient signs and symptoms of hypoglycemia
  2. Nursing actions, interventions and patient response
  3. Time of patient's last meal and amount consumed
  4. Last dose of insulin given
  5. Blood sent to laboratory

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**APPENDIX J**

**SUBJECT: Emergency Treatment of Hypoglycemia**

**Policy No.: C119.11**

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- 6. Report of events to the physician/Licensed Independent Practitioner
- 7. All patient education

- C. If BG was lower than 40, follow policy #C109.2 – *Waived Testing* for further documentation requirements.
  - D. Document on the MAR and note any medications that were held.
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**REFERENCES:**

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M. Villani, B. de Courten, S. Zougas. (2017) Emergency treatment of hypoglycemia: a guideline and evidence review. *Diabetic Medicine*. <https://doi.org/10.1111/fme.qqqq>

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11/06 – Revised  
06/10 – Revised  
01/11 – Revised  
05/12 – Revised  
04/13 – Revised  
05/16 – Revised  
02/19 - Revised  
03/22 - Revised