Name of Policy: Urgent and Emergency Procedures **Policy Number**: 3364-162-03 **Approving Officer**: Chief Operating Officer **Responsible Agent**: Director of Cardiovascular Services, Associate Professor and Chief, Division of Cardiovascular Medicine **Scope**: University of Toledo Medical Center	UTOLEDO HEALTH **Effective date:** 4/5/2025 **Original effective date**: 6/01/2019
Key words: Urgent, Emergency, Cardiac Rehab, Pulmonary Rehab, Rapid Response Team	

☐	New policy proposal	☐	Minor/technical revision of existing policy
☐	Major revision of existing policy	☒	Reaffirmation of existing policy

(A) Policy statement

There shall be specific procedures to ensure an effective system for the management of urgent and emergency events during Cardiac Rehab Sessions (CRS), Supervised Exercise Therapy (SET) for PAD and Pulmonary Rehabilitation Sessions (PRS).

(B) Purpose of policy

The purpose is to provide urgent and emergency protocols and to ensure that staff members are trained in the procedures prior to providing care during a CTS/SET/PRS.

(C) Procedure

The following procedures identify the responsibilities of the Cardiopulmonary Rehabilitation (CR/PR) staff to ensure an effective system for the management of urgent or emergency events during a CTS/SET/PRS. Clinical staff members must be certified by the American Heart Association or the American Red Cross in Basic and Advanced Cardiac Life Support. All staff members should be familiar with urgent and emergent policies and procedures before providing care in a CTS/SET/PRS. A review of urgent and emergent procedures will be documented quarterly at a staff meeting.

(1) An urgent event is defined as a change in a patient's cardiac or pulmonary symptoms at rest or an abnormal cardiac or pulmonary response to exercise such as new onset of chest pain (CP), shortness of breath (SOB), hypo/hypertension, arrhythmia, brady/tachycardia, other indication of cardiac compromise, significant decrease in O_2 saturation, bronchospasm, or other indications of respiratory compromise.

(2) For urgent events between 7:00 a.m. and 5:00 p.m., the MED IV cardiology fellow can be consulted (383-1653).

(3) For urgent events after 5:00 p.m. the cardiology fellow on call can be consulted and contacted by pager.

(4) If a cardiology fellow is not available for consultation, the patient may be transferred to the UTMC Emergency Department (ED) for further evaluation/care if patient is stable.

(5) The Rapid Response Team (RRT) can be activated per policy #3364-100-45-05 for patients with signs/symptoms of deteriorating conditions including:

(a) Nurse uncomfortable with patient's condition

(b) Systolic blood pressure <90 mmHg

(c) Heart rate <40 bpm or >130 bpm or 20% change from baseline

(d) Respiratory distress, change in breathing pattern, or threatened airway (respiratory rate <8 or >28, an acute change in O_2 saturation, or O_2 saturation <90% despite O_2)

(e) Acute/significant change in level of consciousness

(f) Acute/significant bleeding

(g) Color change – pale, dusky, gray, or blue

(h) New, repeated, or prolonged seizures

(i) Failure to respond to treatment for an acute problem/symptom

(6) For life-threatening events, the Cardiopulmonary Rehabilitation staff will follow the UTMC Code Blue Procedure. Instructions for calling Code Blue have been posted by phones throughout the Cardiopulmonary Rehabilitation area.

(7) Preparation for a CTS/SET/PRS

(a) Code Cart/O_2/Defibrillator Check will be completed each day of operation by the Cardiopulmonary Rehab staff in accordance with UTMC policy # 3364-100-45-10.

(b) Ancillary medical supplies are stored in the bottom drawer of the lateral file in the Cardiopulmonary Rehab classroom. Supplies include sterile gloves, size medium (2 pair); sterile gloves, size large (2 pair); red biohazard bag (2); 2x2 gauze sponges (6); nasal cannula (2); 4x4 gauze sponges (5); non-rebreathing mask; 1-inch durapore tape (2 rolls); emesis basin; large basin (2); large blue pads (1 pack).

(c) Emergency medication box is a locked red plastic box containing emergency medications and is located in the locked cabinet that houses the telemetry monitoring system. Maintenance of this box is the responsibility of the CR/PR staff. This box will be taken to the Pharmacy Department for restock and checking when:

(i) A medication has been used

(ii) The lock on the box has been broken

(iii) Medication has expired

(d) Personal protective equipment is stored in the bottom drawer of the lateral file in the Cardiopulmonary Rehab classroom. Supplies include face masks (5), goggles (1), yellow gowns (2), disposable gloves (2 pair), Biohazard Response Personal Protective Equipment Kit (1).

(8) Early Warning Signs and Symptoms of Increasing Risk

(a) All indications of early warning signs and symptoms should be documented in the patient's progress notes in the telemetry monitoring system and/or EMR. The following list from the AACVPR Guidelines for Cardiac Rehabilitation Programs should be used as a guide.

(i) A change in the type, intensity, frequency, or duration of angina will be documented and conveyed to the patient's physician.

(ii) New onset of angina in any patient should be immediately reported to the patient's physician.

(iii) Abnormal resting or exercise blood pressure (BP).

(iv) A changing pattern in the frequency, duration, or type of usual arrhythmias, especially any episodes of arrhythmia associated with lightheadedness.

(v) New onset of atrial or ventricular arrhythmias.

(vi) Changing patterns of dyspnea, coughing or wheezing

(vii) Syncope or presyncope, especially associated with arrhythmias

(viii) Symptoms of transient ischemic attack (TIA) or stroke

(ix) Symptoms of intermittent claudication

(x) Indications of left ventricular (LV) dysfunction, congestive heart failure (CHF) or decompensated cor pulmonale

(xi) A change in the rating of perceived exercise (RPE) with usual exercise

(xii) Worsening or changing patterns of dyspnea at rest or with exercise

(xiii) Swelling of both ankles associated with weight gain

(xiv) Changing patterns of fatigue: increased fatigue with usual exercise patterns or the inability to sleep at night following normal exercise routines.

(b) Items documented in the patient chart will be reported to the referring physician.

(9) Guidelines for Managing Abnormal Responses and Medical Emergencies During Cardiovascular Therapy Sessions, SET for PAD, and Pulmonary Rehab Sessions

(a) The CR/PR staff is to respond appropriately to any patient whose medical status is abnormal or compensated before, during or after a CTS/SET/PRS.

(b) Hypertension

(i) If resting diastolic blood pressure (DBP) is $\geq$ 100 mmHg, check BP after warm-up. If DBP doesn't exceed 110 mmHg, continue with exercise.

(ii) If resting DBP is $\geq$ 110 mmHg, do not exercise patient until DBP is <110 mmHg. CR/PR staff will report elevated DBP to Medical Director, cardiology fellow, and/or referring physician or, if necessary, transport the patient to the ED.

(iii) If DBP is >120 mmHg on two separate readings 15 minutes apart, staff may call the Medical Director, cardiology fellow on call and/or referring physician and transport the patient to the ED if necessary.

(iv) If resting systolic blood pressure (SBP) is $\geq$ 200 mmHg on two separate readings 15 minutes apart, contact the Medical Director, cardiology fellow on call and/or the referring physician or, if necessary, transport the patient to the ED. Staff will follow Policy # 3364-100-45-05 for activating the Rapid Response Team, if necessary.

(v) If exercise SBP is $\geq$ 250 mmHg or DBP is $\geq$ 115 mmHg, discontinue exercise, re-evaluate BP as needed, discontinue exercise for the session if appropriate. Consult Medical Director, cardiology fellow, and/or referring physician as needed.

(vi) Post exercise BP for discharge from CTS/SET/PRS is SBP must be <180 mmHg or $\geq$ 60mmHg and DBP must be <110 mmHg. Consult Medical Director, cardiology fellow, and/or referring physician as needed.

(c) Hypotension

(i) If resting SBP $\leq$ 60 mmHg on two separate readings 15 minutes apart, contact the Medical Director, cardiology fellow on call and/or the referring physician or, if necessary, transport the patient to the ED. Staff will follow Policy # 3364-100-45-05 for activating the Rapid Response Team, if necessary.

(d) Hyperglycemia/Hypoglycemia in patients with Type I or Type II Diabetes

(i) Patients with diabetes who are taking an oral hypoglycemic agent or are on insulin for control of their diabetes will have finger stick blood sugars

(FSBS) assessed pre and post exercise for their first six CRS/SET/PRS. Pre and post exercise FSBS checks will continue if recommended by patient's primary care physician (PCP) or endocrinologist if values of <80 mg/dl or >300 mg/dl are persistently recorded during the first 6 sessions.

(ii) Clinical judgement will be considered along with what type of insulin or oral medication was taken, what time the medication was taken, what time the patient last ate, and time and intensity of exercise to be performed.

(iii) Hyperglycemia

(a) Patients with Type I diabetes who have a FSBS >300 mg/dl will not be allowed to exercise.

(b) Patients with Type II diabetes should exercise with caution if FSBS is ≥ 300 mg/dl provided they are feeling well and are adequately hydrated.

(c) If a patient has repeated FSBS ≥ 300 mg/dl, staff will contact the patient's PCP or endocrinologist.

(iv) Hypoglycemia

(a) If a patient's FSBS is ≤80 prior to exercise, 20 grams of carbohydrate should be ingested. The goal is for FSBS to be >80 mg/dl prior to starting exercise.

(b) If a patient's post blood sugar is <70 mg/dl, the patient will be given 15 grams of carbohydrates and FSBS will be re-checked after 15 minutes.

i. The Medical Director, cardiology fellow, and/or referring physician will be consulted for patients that are symptomatic.

ii. Patients will be transported to the ER if recommended by the Medical Director, cardiology fellow, and/or referring physician.

(c) Patients should be encouraged to test their FSBS one hour after exercise and to be aware of a potential hypoglycemic response for 24-48 hours after exercise.

(d) If a patient experiences repeated FSBS <80 mg/dl with symptoms of hypoglycemia, staff will contact the patient's PCP or endocrinologist.

(e) Angina, acute dyspnea, or other indications of cardiac compromise

(i) If a patient has an onset of angina, acute dyspnea, or other indications of cardiac compromise as determined by CR/PR staff:

(a) Decrease workload or terminate exercise.

(b) Assess heart rate and rhythm on the patient's ECG.

(c) Assess blood pressure

(d) Assess SpO_2

(ii) If symptoms persist for angina:

(a) Administer one 0.4 mg nitroglycerin (NTG) tablet sublingual (per Cardiovascular and Pulmonary Rehabilitation Physician Referral)

(b) Assess BP 5 minutes after administering NTG

(c) If symptoms persist and BP is stable, repeat NTG in 5-minute intervals two times.

(d) If symptoms persist and BP is not stable, consult Medical Director, cardiology fellow and/or transport patient to the ED.

(e) Staff will follow Department Guideline #11 for Effective handoff to the ED

(f) Staff will follow Policy #3364-100-45-05 to activate the Rapid Response Team if necessary.

(iii) If symptoms persist for dyspnea:

(a) SpO2 shall remain ≥ 90% unless otherwise indicated by referring physician.

(b) Administer supplemental oxygen, if indicated.

(c) Use a rapid-onset bronchodilator medication, if indicated.

(d) If dyspnea persists and SpO2 is not within acceptable limits, transport patient to the ED.

(e) Staff will follow Department Guideline #11 for Effective handoff to the ED

(f) Staff will follow Policy #3364-100-45-05 to activate the Rapid Response Team if necessary.

(f) Bradycardia/Tachycardia

(i) Recognize the patient problem and terminate exercise.

(ii) Assess heart rate and rhythm on the ECG and assess BP.

(iii) If the patient is alert, awake and asymptomatic, contact the medical Director, cardiology fellow, and/or transport patient to the ED if appropriate.

(iv) If the patient is alert, awake and symptomatic, staff will follow Guideline #11 for Effective handoff to the ED

(v) Staff will follow Policy # 3364-100-45-05 to activate the Rapid Response Team if appropriate.

(vi) If the patient is unresponsive, initiate CPR and follow the UTMC Code Blue Procedure.

(g) Cardiopulmonary Arrest

(i) Recognize the patient problem and verify unresponsiveness and pulse absent

(ii) If the patient is unresponsive and pulseless, initiate CPR and have staff members follow the UTMC Code Blue Procedure.

(iii) Other staff members will remove patients from the immediate area.

(iv) Following any emergent event where a Code Blue was initiated, the CR/PR staff will review the incident, a critique will be performed, and the conclusions drawn, and areas of deficiency documented.

(D) References

(1) American Association of Cardiovascular and Pulmonary Rehabilitation: Guidelines for Cardiac Rehabilitation Programs; Sixth Edition; 2021.

(2) American Association of Cardiovascular and Pulmonary Rehabilitation: Guidelines for Pulmonary Rehabilitation Programs; Fifth Edition; 2020.

Approved by: /s/ _____ Todd Korzec, RN, BSN Director, Cardiovascular Services 3/31/2025 _____ Date /s/ _____ Samer Khouri, MD Associate Professor and Chief, Division of Cardiovascular Medicine 3/31/2025 _____ Date /s/ _____ Christine Stesney-Ridenour, FACHE Chief Operating Officer 4/5/2025 _____ Date *Review/Revision Completed by:* *Director, Cardiovascular Services*	**Policies Superseded by This Policy:** • *None* Initial effective date: 6/1/2019 Review/Revision Date: 6/10/13 7/24/15 3/1/2019 3/2022 3/2024 4/5/2025 Next review date: 4/5/2028