Every nuclear cardiology imaging facility should have written protocols for all procedures. In addition, written protocols and policies should be in place for all other medical and nonmedical procedures and anticipated incidents.

Protocols and policies should be easily available to the staff, i.e., a copy should be present in the imaging rooms or stress laboratory. Many hospital protocols and policies are posted on the hospital’s web site. These policies not only help to run a laboratory more efficiently, but also prepare them for dealing with potential problems. Safety should be a major concern for any laboratory. The policies listed in this chapter are also required by the ICANL for accreditation of a nuclear cardiology laboratory (see also www.icanl.org).

A nuclear cardiology imaging facility should have at the minimum written protocols and policies for the following:

- Radiation safety and handling of radiopharmaceuticals
- Clinical indications of procedures
- Medical emergencies
- Patient identification
- Patient pregnancy assessment
- Patient confidentiality and HIPAA compliance
- Infection control
- Electrical equipment safety
- Fire safety

Protocols should be dated and preferably signed by the medical and technical director.
Radiation Safety and Handling of Radiopharmaceuticals

These written protocols are extremely important. Radiation safety must be taken seriously. Every imaging facility should have a radiation safety officer and written policies on the receipt and storage of radioisotopes/radiopharmaceuticals, proper preparation and calibration of radiopharmaceuticals, proper administration of radiopharmaceuticals, disposal of the radioactive trash, and how to handle spills of radiotracer. The policies should also discuss the proper use and quality control of radiation safety equipment and techniques to reduce technologist radiation exposure.

Clinical Indications

The clinical indications for stress testing and imaging procedures should be in compliance with the published AHA/ACC guidelines.

Cardiac Emergency

A written protocol should be in place for cardiac emergencies. In general, exercise testing is very safe. Using the Bruce, modified Bruce, or other standardized graded protocols, cardiac emergencies (persistent severe ischemia, acute infarction, cardiac death) occur infrequently (1:10,000 exercise tests). However, with an increasingly sicker patient population and greater number of patients with known coronary artery disease referred for study, cardiac emergencies may occur more frequently. Consequently, laboratory personnel should be well prepared to deal with cardiac emergencies.

A qualified health care provider, certified in CPR or ACLS, should supervise and be responsible for stress testing. As a rule two people are needed to administer an exercise test. Defibrillation equipment and “crash cart” must be present in the immediate vicinity of the stress laboratory. Laboratory personnel (including technologists and administrative personnel) should know what to do when a “code” is called.

In order to deal adequately with emergencies all exercise staff and preferably also imaging staff should know:

1. Emergency phone number(s).
2. Where emergency equipment and medications, i.e., crash cart, are located.
3. How to assemble the Ambu bag and hook up to oxygen.
4. How to turn on the defibrillator and place chest leads.
5. How to start CPR.
6. How to assist physician(s) and nurse(s) during CPR.