General Medical Procedure

12-lead ECG Program

Prehospital 12-lead ECG acquisition with relay of results to the receiving hospital improves time to treatment for acute myocardial infarction.

The purpose of this policy is to insure that prehospital 12-lead recordings are performed in a responsible manner, coordinated with prehospital ALS providers and medical control, and monitored by quality improvement and evaluation procedures.

1. Program Personnel
   1. Physician director is EMS Medical Director
   2. Training Coordinator
      1. Each participating service will have a designated training coordinator
      2. Licensed EMS Instructor-Coordinator
      3. Current ACLS
   3. Course Instructor
      1. Provides initial training
      2. Licensed paramedic, RN or physician
      3. Approved by the EMS Medical Director and training coordinator
   4. Prehospital 12-lead cleared paramedic
      1. Currently licensed paramedic by the MDCIS
      2. Employed by an approved ALS provider
      3. Current ACLS
      4. Successfully completed an approved 12-lead training program
      5. Participate in 12-lead recertification as required by the EMS medical director

2. Agency Requirements
   1. Medical director and MCB approved training, equipment and personnel of participating agencies
   2. Provide staffing as follows:
      1. ALS unit staffed with 12-lead cleared paramedic
      2. Comply with MCB and MDCIS staffing requirements for the licensed level of care.
   3. Maintain accurate records of personnel licensure, ACLS training, 12-lead training and recertification.
   4. Records must be available to the MCB, MDCIS or other appropriate regulatory agencies upon request.
   5. Provide reports as deemed necessary by the MCB.
   6. All 12-lead providers are expected to follow the procedures and protocols as stated in the policy. If the EMS medical director or MCB determines that the provider is in violation of the policy, the provider’s 12-lead program approval may be suspended or revoked.

3. Equipment
   1. Manufacturer and model must be approved by the MCB
   2. Provisions for routine equipment service checks
   3. 12-lead cleared paramedics must have appropriate communication hardware available at all times
4. 12-lead Training Requirements

1. Program Faculty
   1. EMS Medical Director
      1. Responsible for medical supervision of all aspects of 12-lead program
      2. Participate in selection, training and certification process for 12-lead cleared paramedics
      3. Prepare and approve written standing orders/protocols
      4. Supervise and assure that education and proficiency requirements are met
      5. In conjunction with the 12-lead provider agency, provides data to the MCB and MDCIS.
      6. Responsible for removal and reinstatement of personnel or agencies participating in prehospital 12-lead ECG acquisition
   2. Training Coordinator - responsible for development and implementation of 12-lead training program as approved by EMS Medical Director
   3. Course Instructor(s) - provides initial and recertification training. He/she may be the EMS Medical Director and/or training coordinator

2. Student Qualifications
   1. Fully licensed paramedic by MDCIS - EMS Section and employed by an approved ALS provider
   2. Current ACLS
   3. Completion of 12-lead training course established by training coordinator and approved by EMS Medical Director

3. Initial Training Course Content
   1. Approved by EMS Medical Director
   2. Introduction including cardiovascular anatomy and physiology, basic cardiac electro physiology, and history/theory of prehospital 12-lead ECG
   3. Demonstration of use
   4. Practical training including situational simulations
   5. Successful completion of testing which includes written and practical examination
   6. Clinical training with 12-lead application and interpretation on patients

4. Recertification - in order to continue to practice as a 12-lead cleared paramedic, each individual must undergo recertification conducted by a course instructor, under the direction of the EMS Medical Director. Recertification period will be approved by the Medical Control Board for each program prior to implementation.

5. Prehospital 12-lead ECG Reporting
   1. Application of 12-lead ECG clearly documented on EMS run sheet
   2. Result of acute myocardial infarction clearly documented on EMS run sheet and Acute MI Report and relayed to the receiving hospital.
   3. Monthly QI report listing number of 12-lead applications and number of positive AMI 12-leads performed.

6. 12-lead Procedure
   1. Follow Standard Pre-hospital Care@Protocol III-1
   2. If patient > 25 years old with chest pain, acquire 12-lead ECG as trained.
   3. Relay acute myocardial infarction result to medical control
   4. Maintain copy of 12-lead ECG with patient
   5. Complete Acute MI Report
   6. Follow Protocol 2-08, Ischemic Chest Pain - Suspected Acute Myocardial Infarction@2-20a