Southeast Arizona EMS Region

Standing Order Training Module

Acute Pulmonary Edema

January 2005

PURPOSE

This SAEMS Standing Order Training Module has been developed to serve as a template for EMS provider training. The intent is to provide consistent and concise information to all providers practicing within the SAEMS Region. The content of the Training Module has been developed by the Protocol Development and Review Committee, and includes the specific Standing Order, resource and reference material, and instructions for completing the Training Module to obtain continuing education credit. One hour of SAEMS continuing education credit may be issued following successful completion of the module.

OBJECTIVES: Upon completion of this learning module the participant will be able to:

1. Discuss the role of medical direction related to the use of Standing Orders.
2. List three benefits of Standing Orders.
3. Outline inclusion and exclusion criteria for this Standing Order.
4. Describe the communication process between the field and the receiving facility when a Standing Order is implemented.
5. List the elements of the dispatch radio relay.
6. List two reasons for direct facility (on-line) contact following implementation of a Standing Order.

INSTRUCTIONS:

1. Read the accompanying information, Standing Order, and any additional reference material as necessary.
2. Complete the attached Posttest by _____, and return with self addressed envelope to:

   _____

   _____

   _____

3. A SAEMS CE Form will be issued to providers scoring greater than ____% on the Posttest.
4. Please contact _____ for questions, suggestions, concerns.

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Resource Material

OVERVIEW

The EMS system in Tucson has traditionally operated under direct medical control, requiring early radio contact with a base hospital physician on all prehospital encounters. The concept of Standing Orders developed as a natural evolution of a busy EMS system. SAEMS implemented Standing Orders in 1998, with the intent of reducing the amount of time required for radio contact while maintaining or improving the level of patient care provided in the community. The regional Base Hospital Medical Directors approved each Standing Order and granted authority for providers to assess and treat select patients *without* on-line medical direction. The potential benefits of a Standing Order (off-line) system include a shorter on-scene time, more appropriate treatment decisions, more time to interact with the patient, and broader consistency in care.

Providers practicing in the SAEMS region are governed not only by their Scope of Practice, but also by Protocols, Minimum Treatment Standards, and Standing Orders. There are a number of SAEMS *Administrative* Protocols outlining responsibilities for such things as approved documentation abbreviations, infectious disease exposure notification, and select patient triage parameters. The *Advanced Training* Protocols list those skills requiring additional training and medical director approval; for example, automatic transport ventilators and central line insertion.

Minimum Treatment Standards are an algorithmic flow of basic standards of care for various patient care situations. They outline, at a minimum, the assessment and treatment considerations for BLS and ALS providers, and are available should communication attempts for on-line medical direction fail.

Standing Orders differ from Protocols and Minimum Treatment Standards in that there is no required contact with a medical direction authority for orders. The physician orders are outlined on each Standing Order document. They are the legal equivalent of a radio transmitted, on-line order from a medical direction authority. For this reason, they do not allow for any deviation: orders must be followed sequentially and precisely. They are not guidelines or suggested interventions.

DEFINITIONS

- **Protocols** - Guidelines for prehospital care ranging from administrative to procedural.
- **Minimum Treatment Standards –** Algorithm for minimum standard of care guidelines for patient care situations.
- **Standing Orders** – Specific interventions which may be undertaken in lieu of contacting on-line medical direction.
- **On-Line Medical Direction** - Medical direction of prehospital activities by direct radio or telephonic communications with a medical direction authority.
- **Medical Direction Authority** – An administrative medical director or an on-line medical direction physician.
- **MEDS (dispatch) Communication Relay** – Essential information relayed from the field to the receiving facility via dispatch regarding a Standing Order patient.

DOCUMENTATION

Quality prehospital care can be achieved following adequate education and training, accurate patient assessment, skilled procedure intervention, use of good judgment, and continuous quality improvement. Documentation is essential to validate quality care. Reports should allow others to understand and follow the providers' decision-making process, particularly when Standing Orders are implemented, as the prehospital care report will often be the sole document describing the call.

There are key components to the written report when Standing Orders are utilized. Thorough documentation of an adequate assessment is essential. Reference to inclusion and exclusion criteria is recommended, with attention also paid to pertinent negatives. It should be clear why the particular Standing Order was chosen. Implementation and response to interventions is also a critical part of the prehospital report. Independent, off-line practice often requires additional responsibility on the part of the provider when it comes to judgment and documentation.

COMMUNICATION

All standing orders require the following information be provided to dispatch and relayed to the receiving facility: specific standing order used, age, sex, and ETA. Additional information may be required as follows:

1. Acute Anaphylaxis/Stable Allergic Reaction	Stable/Unstable
2. Acute Pulmonary Edema	
3. Asthma/COPD	
4. Cardiac Arrest	
5. Chest Pain	12-Lead sent?
6. Dead on Scene	**No hospital relay**
7. Hypoglycemia	
8. Minor Medical	Chief complaint ("Sick Person" not acceptable)
9. Motor Vehicle Crash	**No hospital relay**
10. Pain Management	Chief complaint (mechanism of injury)
11. Seizures	BLS or ALS
12. Stroke/TIA	Symptom onset, patient weight
13. Unconscious/Unresponsive	

There is no need for a dual patch on standing order patients going to a non-medical direction authority facility (VA, HCH, or UPH), as the physician orders are already provided. Receiving facilities must be familiar with each standing order to best anticipate and prepare for the patient's arrival. Standing Orders are not intended for use during interfacility transfers, nor are they appropriate for use on pregnant patients. Check with your medical direction authority for recommendations regarding the use of Standing Orders during scene transfers greater than 30 minutes. Also check with your medical direction authority for a list of those Standing Orders approved for *your* use.

NEVER HESITATE TO CONTACT MEDICAL DIRECTION FOR ANY PROBLEM, QUESTION, OR CHANGE IN STATUS!

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Post Test

Name: _____ Date: _____

1. Which is NOT an immediate supportive care measure?
    a. O2 to keep O2 saturation > 90%
    b. Cardiac monitor
    c. Endotracheal intubation
    d. Position of comfort

2. You arrive at a scene to find a 14 year old male in severe respiratory distress. You perform a primary assessment and find labored breathing, rales and "pink-frothy type sputum". You determine that he is most likely suffering from acute pulmonary edema. Which of your findings requires you to contact Medical Control IMMEDIATELY?
    a. Labored breathing
    b. His age
    c. His lung sounds
    d. The color of his sputum

3. Which medications may be administered enroute to the hospital for a patient that meets the criteria for inclusion in the Acute Pulmonary Edema Standing Order?
    a. NTG
    b. Bumex
    c. Lasix
    d. All the above

4. You have loaded a patient into the back of your ambulance and are enroute to the hospital. Your patient's blood pressure is now 89/48 after a 2nd SL NTG (intial BP was 110/76). You have an IV of NS established, O2 via NC with sats > 90%, patient is becoming confused and lethargic. Your next step would be to prepare and perform and endotracheal intubation.
    a. True
    b. False

5. Describe/list 5 symptoms you would expect to find on assessment of a patient with pulmonary edema.
    a. _____
    b. _____
    c. _____
    d. _____
    e. _____

6. You always initiate the Acute Pulmonary Edema Standing Order on all patients that present with respiratory rate >20, using accessory muscles, labored breathing, rales/wheezing, and history of respiratory distress.

a. True
b. False

7. If your patient's respiratory rate is < 8 breaths a minute, you should consider endotracheal intubation.
    a. True
    b. False

8. Your patient has a presentation of stridor, cyanosis, and severe anxiety. You should initiate the Acute Pulmonary Edema Standing Order.
    a. True
    b. False

9. Describe/list 3 symptoms that would EXCLUDE a patient from the Acute Pulmonary Edema Standing Order.
    a. _____
    b. _____
    c. _____

10. You arrive on scene where you find a 74 year old female with notable cyanosis, wheezing, preferring a sitting position and pink-tinged sputum. Her HR is 120, RR is 34, BP is 156/94 and Pulse Ox of 84%. You may initiate the Acute Pulmonary Edema Standing Order.
    a. True
    b. False

1. **Bibliography**

1. Rottman SJ, Schriger DL, Charlop G, et al: On-line medical control versus protocol-based prehospital care. *Annals of Emergency Medicine* 1997; 30:1, 62 – 68.

2. Krafsur J: What to do when EMS protocols don't fit. *National Association of Emergency Physicians Newsletter.* 2000; 9:3. 2-3.

3. Trauma Team EMS PROTOCOLS
   HTTP://WWW.SSGFX.COM/CP2020/MEDTECH/PROCEDURES/PROTOCOLS.HTM
   Prehospital Medical Protocols & Standing Orders Bryan E. Bledsoe, DO, FACEP.

3. WWW.JEMS.COM

4. http://www.nlm.nih.gov/medlineplus/ency/article/000140.htm