

KERN COUNTY EMS DEPARTMENT

***EMT-1 Combitube*
*Policies and Procedures***

Taft City Fire Department



March 14, 2000

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Revisions:

03/14/200 - Implemented

I. GENERAL PROVISIONS:

- A. The purpose of these policies and procedures are to define administrative, operational, training, quality improvement and medical control requirements for operation of EMT-1 Combitube (multi-lumen esophageal-tracheal device) by the Taft City Fire Department in compliance with California Code of Regulations Title 22, EMT-1 Optional Scope of Practice.**
- B. This program is implemented and maintained under the authority of the Kern County EMS Department as the local EMS Agency. Each EMT-1 Provider that intends to provide EMT-1 Combitube shall be authorized as an EMT-1 Combitube Provider by the Kern County EMS Department.**
- C. Each Combitube Accredited EMT-1 and authorized EMT-1 Combitube Provider shall maintain compliance with these policies and procedures. An EMT-1 shall have valid EMT-1 Combitube Accreditation and may only provide EMT-1 Combitube Accreditation Scope of Practice when on duty and employed by an authorized EMT-1 Combitube Provider.**
- D. The intent of EMT-1 Combitube under CCR Title 22 EMT-1 Optional Scope of Practice is to provide unconscious/unresponsive or apneic patients advanced airway control and management at the earliest appropriate opportunity by EMT-1 Combitube Accredited personnel.**
- E. The Taft City Fire Department is authorized to provide EMT-1 Combitube level of services to patients that meet indications for Combitube use in all areas serviced by the Taft City Fire Department under primary response or mutual aid response within or outside of Kern County.**
- F. These policies and procedures may be revised, modified or deleted at any time by the Kern County EMS Department (Department).**

II. EMT-1 COMBITUBE PROVIDER REQUIREMENTS:

- A. An EMT-1 provider that intends to provide EMT-1 Combitube level of service within Kern County shall refer a written request to the Department. The request shall include the following:**
 - 1. Provider Name, location of base of operations;**
 - 2. Level of services currently provided;**
 - 3. Areas and communities within Kern County served;**

4. A thorough description of where EMT-1 Combitude level of service is intended to be provided and confirmation of intended coverage with EMT-1 Combitude Accredited personnel;
 5. A list and explanation of any additional rates or charges to the public as a result of providing Combitude skills;
 6. A description of need for EMT-D/Combitude Provider authorization for the intended area;
 7. Confirmation that the required supplies and necessary equipment has been obtained;
 8. Statement of affirmation from an authorized organization representative, owner or president and the EMT-D/Combitude Medical Director that the organization will maintain continued compliance with Department policies and procedures; and
 9. The intended implementation date.
- B. The Department will evaluate the written request, refer requests for additional information as needed, and will provide written confirmation of EMT-1 Combitude authorization or denial of the request for authorization.
- C. The Department will develop a set of EMT-1 Combitude Policies and Procedures for each authorized EMT-1 Combitude Provider which define all requirements related to initial implementation and maintenance of the EMT-1 Combitude program.
- D. The EMT-1 Combitude Provider shall ensure compliance with all initial and on-going training and EMT-1 Combitude accreditation requirements for all EMT-1 Combitude accredited personnel employed by the provider prior to implementation of the EMT-1 Combitude Program. The EMT-1 Combitude Provider shall not permit an EMT-1 without valid EMT-1 Combitude accreditation to perform EMT-1 Combitude scope of practice within Kern County.
- E. The EMT-1 Combitude Provider shall ensure that all EMT-1 Combitude accredited personnel have adequate access to supplies and equipment to provide EMT-1 Combitude services when needed.
- F. At minimum, the EMT-1 Combitude Provider shall provide and maintain the following supplies and equipment for each appropriate emergency response unit:
1. (1) - Adult Combitude – complete set;
 2. (1) - Small Adult Combitude – complete set;

3. (2) – Water Soluble Lubricant (K-Y Jelly or equivalent), packets or tubes, 15 ml minimum;
 4. (1) - Bag-Valve-Mask, Adult, single patient use, disposable, with reservoir and oxygen connecting tubing;
 5. (1) - Bag-Valve-Mask, Pediatric, single patient use, disposable, with reservoir and oxygen connecting tubing;
 6. (1) – Stethoscope; and
 7. (1) – Portable oxygen tank with regulator and oxygen liter flow valve/tubing connector – capable of delivering a minimum of 15 liters per minute of oxygen or more.
- G. The EMT-1 Combitube Provider shall conduct case outcome research on each case where Combitube insertion was attempted by EMT-1 Combitube accredited personnel. The EMT-1 Combitube Provider shall refer each EMT-1 Defibrillation/Combitube Report to the Department and shall develop and send quarterly EMT-1 Combitube Reports to the Department which include the following information on each case where Combitube insertion was attempted (both successful and unsuccessful cases):
1. Incident Date;
 2. Incident Call Time;
 3. Incident Location;
 4. Incident Map Coordinates;
 5. Patient Last Name;
 6. Patient First Name;
 7. Unit Identification;
 8. Identification of the EMT-1 Combitube accredited personnel that attempted Combitube insertion (last and first name);
 9. Confirmation if the patient was in cardiopulmonary arrest, respiratory arrest only, or unconscious/unresponsive without a gag reflex;
 10. Total Number of Combitube Insertion Attempts;

11. If Combitube insertion was successful or unsuccessful;
 12. The Combitube port used (#1 or #2) to provide on-going ventilation;
 13. Prehospital Outcome (Combitube left in place for transport, Combitube removed by Paramedic personnel, resuscitation discontinued at scene; and
 14. Hospital Emergency Department Outcome (deceased, admitted, discharged alive from Emergency Department, transferred to another facility alive from the Emergency Department).
- H. The EMT-1 Combitube Provider shall assist the Department with further individual case research if requested.
- I. The EMT-1 Combitube Provider shall be responsible to maintain sufficient EMT-1 Combitube accredited personnel to operate the program on a 24 hour basis, subject to unavoidable and short term staffing problems, prior training commitments and emergency activity. In such cases, the EMT-1 Combitube Provider shall immediately notify the Department.
- J. The EMT-1 Combitube Provider shall also provide continuous quality assurance monitoring of all EMT-1 Combitube accredited personnel, provide continuing medical education as required by the Department and maintain records of training, certification, accreditation and skills examinations of all EMT-1 Combitube accredited personnel.
- K. The EMT-1 Combitube Provider shall implement and maintain operation of the EMT-1 Combitube Program in compliance with these policies and procedures. EMT-1 Combitube Provider authorization may be placed on probation, suspended or revoked at the discretion of the Department for non-compliance with these policies and procedures.

III. EMT-1 COMBITUBE TRAINING AND ACCREDITATION:

- A. EMT-1 Combitube training shall only be provided by Department authorized instructors in accordance with these policies and procedures and EMT-1 Combitube Educational Curriculum contained in Enclosure One of these policies and procedures.

- B. To become authorized as an EMT-1 Combitube instructor, the instructor shall:**
- 1. Have active State of California Paramedic Licensure and local Paramedic Accreditation, valid California Registered Nurse Licensure with experience in emergency medicine, or have a valid Physician License with experience in emergency medicine;**
 - 2. Successfully complete an EMT-1 Combitube Instructor briefing provided by the Department; and**
 - 3. Receive EMT-1 Combitube Instructor authorization from the Department.**
- C. EMT-1 Combitube Instructors may be required to meet additional requirements to maintain EMT-1 Combitube authorization as specified by the Department.**
- D. EMT-1 Combitube Instructor authorization may be placed on probation, suspended or revoked at the Department discretion for non-compliance to these policies and procedures.**
- E. Initial EMT-1 Combitube Training shall include a minimum of five (5) hours of training provided by an on-site, Department authorized instructor, in accordance with the course content specified in Enclosure One.**
- F. Each student must successfully pass a 25 question written exam (approved by the Department) with 80% or higher within two attempts and pass the skills examination by demonstrating competent Combitube utilization and skills within two attempts to receive an EMT-1 Combitube Course Completion Record. Students that do not meet either of these requirements shall be required to retake the entire initial EMT-1 Combitube Training Program to be eligible to receive a course completion record.**
- G. Each person that successfully completes the initial EMT-1 Combitube Training Program shall be issued an EMT-1 Combitube Course Completion Record with the following information:**
- 1. Student Name;**
 - 2. EMT-1 Certification Number;**

3. The following wording:

“The individual named below has successfully completed EMT-1 Combitube Training in accordance with Kern County EMS Department requirements and CCR Title 22. This individual has been verified competent in Combitube indications for use, insertion technique, ventilation, maintenance, complications/actions, operational procedures, documentation requirements and medical control by the EMT-1 Combitube Instructor. This is not an EMT-1 Combitube Accreditation – this original Course Completion and other required information must be referred to the Kern County EMS Department to obtain EMT-1 Combitube Accreditation.”

4. Course Completion Date; and

5. EMT-1 Combitube Instructor Name and Signature.

H. Within 2 weeks of completion of an initial EMT-1 Combitube Training Program, the EMT-1 Combitube instructor shall refer a course completion list to the Department with the date of program completion, each enrolled student name, written exam score, practical exam score, confirmation if the student passed or failed the program, instructor name and instructor signature. The instructor shall validate competency and use the form provided in Enclosure Three.

I. EMT-1 Combitube Accreditation Requirements:

- 1. In order to be eligible for EMT-1 Combitube Accreditation, an individual shall:**
 - a. Submit verification that the individual is employed by an authorized EMT-1 Combitube Provider;**
 - b. Submit an original EMT-1 Combitube Course Completion Record with a course completion date that is not more than three (3) months old (if greater than 3 months have elapsed, the individual will be required to complete the number of required skills demonstrations and testing – if greater than 1 year, the individual must re-complete the initial training program);**
 - c. Have valid EMT-1 Certification issued by the Kern County EMS Department;**
 - d. Complete the Department application record;**
 - e. Meet any other Department requirements; and**

- f. Pay the required fee.
- 2. EMT-1 Combitude Accreditation is continuous as long as valid Kern County EMT-1 certification and required EMT-1 Combitude skills demonstrations and testing are maintained. The term of EMT-1 Combitude accreditation expires the same date as basic Kern County EMT-1 certification.
- J. EMT-1 Combitude skills demonstrations and testing, in accordance with the process contained in Enclosure One, shall be completed for each EMT-1 Combitude accredited person in accordance with the following:
 - 1. Monthly, for the first 6 month term, from the date of implementation of the EMT-1 Combitude program by the provider; and
 - 2. Every 4 months, on-going, after the first six (6) months of implementation of the EMT-1 Combitude program by the provider.
- K. After the first six months of implementation of the EMT-1 Combitude program by the provider, individuals that complete initial EMT-1 Combitude training and accreditation shall successfully complete EMT-1 Combitude Skills demonstrations and testing monthly for two (2) consecutive months from the date of course completion, followed by the on-going EMT-1 Combitude provider requirements (every 4 months).
- L. The EMT-1 Combitude Provider shall send a list with confirmation of successful EMT-1 Combitude skills demonstration and testing for each EMT-1 Combitude accredited person employed by the provider upon completion of each rotation of EMT-1 Combitude skills demonstration and testing. The list shall also include the names of any EMT-1 Combitude accredited individuals that did not successfully complete or attend the EMT-1 Combitude skills demonstration and testing as required. The instructor shall validate competency on the form provided in Enclosure Three.
- M. EMT-1 Combitude accredited individuals that did not successfully complete or attend the EMT-1 Combitude skills demonstration and testing may be required to complete additional EMT-1 Combitude training and testing at the discretion of the Department.
- N. In the case of EMT-1 Combitude demonstration and skills testing failure, the EMT-1 Combitude Instructor will provide additional review, education and repeat the skill proficiency examination once for any individual with unsatisfactory skills or knowledge.

- O. **If an EMT-1 Combitude accredited individual is unable to successfully pass EMT-1 Combitude demonstration and skills testing after two attempts, the EMT-1 Combitude Instructor shall immediately notify the EMT-1 Combitude Provider and provide verbal and written notice to the Department. An individual that is unable to demonstrate satisfactory Combitude skills or knowledge during skills proficiency examination after two attempts shall have Combitude accreditation temporarily suspended and shall not be permitted to provide EMT-Combitude scope of practice until approved by the Department. The Department Certificate Review Process Regulations may be used in this situation.**
- P. **Valid Kern County EMT-1 certification and EMT-1 Combitude accreditation is required to provide EMT-1 Combitude scope of practice within Kern County. Any EMT-1 that provides EMT-1 Combitude scope of practice without valid EMT-1 Combitude accreditation will be at risk of EMT-1 certification suspension or revocation by the Department in accordance with Certificate Review Process Regulations.**
- Q. **EMT-1 Combitude accreditation may be placed on probation, suspended or revoked by the Department for non-compliance with EMT-1 Combitude skills demonstration and testing requirements. Non-compliance with EMT-1 Combitude skills demonstration and testing requirements shall not affect basic EMT-1 certification.**

IV. COMBITUBE PREPAREDNESS, SCENE ARRIVAL & INDICATIONS:

- A. **Preparedness:**
 - 1. **For Cardiac Arrest cases, one EMT-1 should be pre-assigned to operation of EMT-1 Defibrillation equipment (if accredited) and one EMT-1 Combitude accredited EMT-1 should be pre-assigned to Combitude insertion.**
- B. **Scene Arrival:**
 - 1. **For all EMS incidents, Combitude equipment should be removed from responding apparatus and brought to the proximity of the patient.**
 - 2. **All standard basic life support /EMT-1 patient assessment, care and treatment are to be used in conjunction with Combitude use. If obvious death criteria are present, resuscitation should not be started.**
- C. **Indications for Combitude Use:**

1. EMT-1 Combitube accredited personnel at the scene shall be responsible to accurately assess the patient to determine if Combitube criteria are met.
2. If the patient meets any of the following EMT-1 Combitube Patient Indications (a. all indications; or b. all indications), the Combitube shall be used; the EMT-D responsible for Combitube equipment shall prepare the patient insertion:
 - a. Unconscious and unresponsive without a gag reflex:
 - 1) Not a confirmed diabetic hypoglycemia case (with the exception of status generalized seizure activity due to hypoglycemia) or not a known opiate overdose case with the exception of any of the following:
 - ◆ ALS Ambulance response time will not be within 8 minutes to the scene at the time Combitube is confirmed to be indicated;
 - ◆ A BLS Ambulance has been sent; or
 - ◆ The patient condition deteriorates to respiratory arrest or cardiac arrest.
 - 2) Adult Size Combitube - Height over five feet (152cm) or Small Adult Size Combitube - Height between 4 feet and 5.5 feet;
 - 3) No known or suspected esophageal disease;
 - 4) No known ingestion of a caustic substance;
 - 5) No known or suspected airway obstruction; and
 - 6) Paramedic Ambulance not expected to be on scene within two (2) minutes.
 - b. Pulseless and Apneic or Agonal Respirations:
 - 1) Adult Size Combitube - Height over five feet (152cm) or Small Adult Size Combitube - Height between 4 feet and 5.5 feet;
 - 2) No known or suspected esophageal disease;

- 3) No known ingestion of a caustic substance;
- 4) No known or suspected airway obstruction; and
- 5) Paramedic Ambulance not expected to be on scene within two (2) minutes.

c. If the patient does not meet EMT-1 Combitube Patient Indications (a. all indications; or b. all indications), the Combitube shall not be used and standard basic life support, EMT-Defibrillation or EMT-1 level care shall be provided as appropriate.

V. EMT-1 COMBITUBE USE PROTOCOLS:

- A. Take appropriate body substance isolation precautions.
- B. Assess patient and check carotid/femoral pulse. Begin CPR if pulseless and apply EMT-Defibrillation equipment if patient meets EMT-Defibrillation Patient Criteria.
 1. If EMT-Defibrillation equipment detects a shockable rhythm, do not delay defibrillation. Administer up to three shocks according to protocol (3 shocks if no change, or less than 3 if change in shockable rhythm as indicated by EMT-Defibrillation equipment).
 2. If a shock is not indicated, or during or after the initial three shocks according to protocol, check for pulse. If no pulse, begin CPR.
- C. If patient meets EMT-1 Combitube Patient Indications, the team member responsible for insertion should have equipment prepared for insertion and shall insert the appropriate sized Combitube according to the following protocol.
 1. Assess the patient for upper airway obstruction;
 2. Position the patient properly (ideally supine) and hyperventilate the patient (1 ventilation every 3 seconds) for thirty (30) seconds;
 3. Prior to insertion, test cuff integrity by inflating each cuff with the prescribed volume of air;
 4. Lubricate tube with a water soluble lubricant to facilitate insertion;

5. The fluid deflector should be attached to deflect stomach contents away from rescue personnel. Attach the fluid deflector to the clear connecting lumen marked No. 2;
6. Lift the tongue and jaw upward with one hand;
7. With the other hand, hold the Combitube so that it curves in the same direction as the natural curvature of the pharynx. Maintain a mid-line position of the Combitube. Insert the tip into the mouth, advance in a downward curved movement until the patient's teeth lie between the two printed bands on the Combitube;

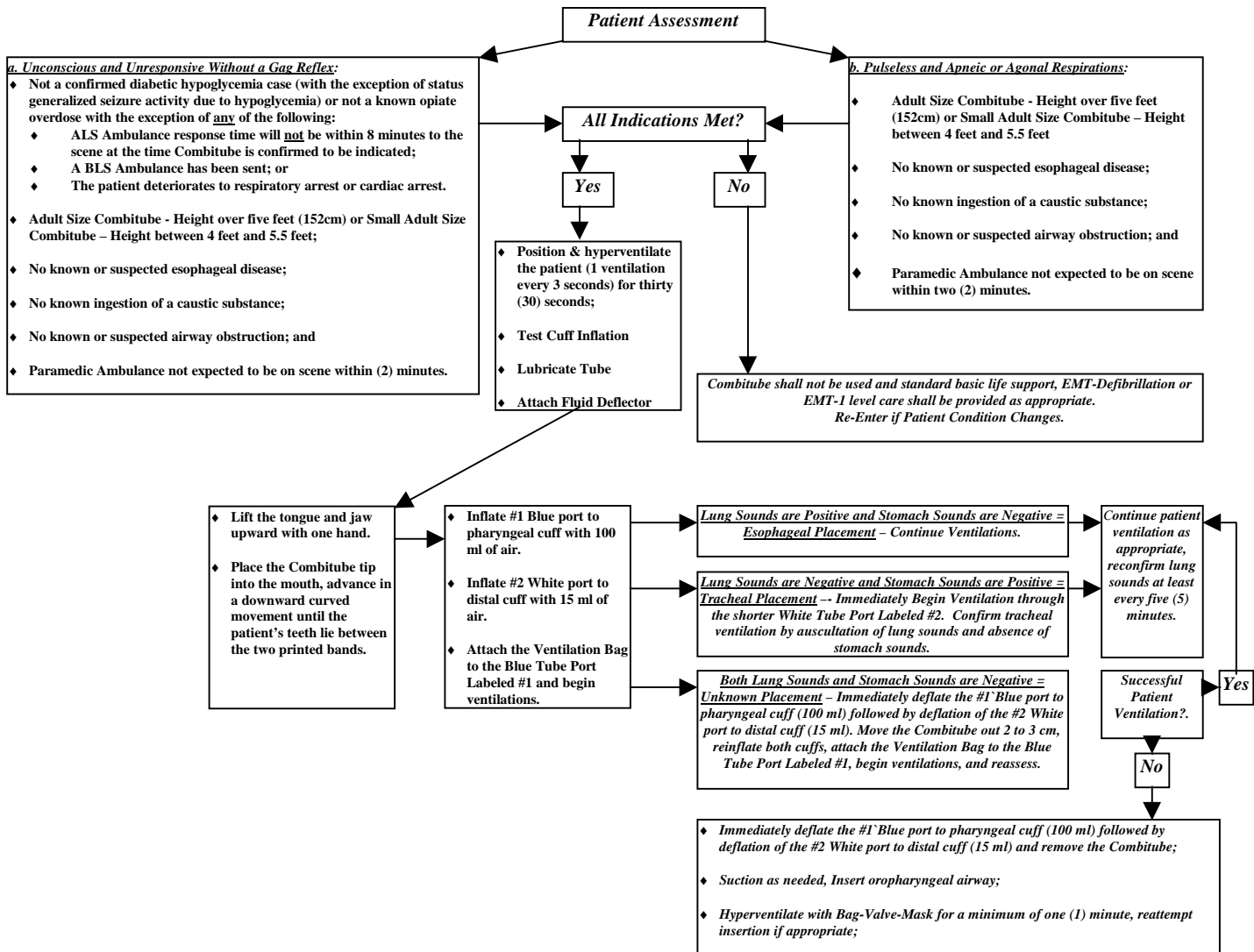
CAUTION: DO NOT FORCE THE COMBITUBE. If the tube does not advance easily, redirect it or withdraw and reinsert.

8. Inflate #1 Blue port to pharyngeal cuff with 100 ml of air using the 140 ml Blue color-coded syringe supplied. The large latex cuff will fill and may cause the Combitube to move slightly from the patient's mouth. This is to be expected;
9. Inflate #2 White port to distal cuff with 15 ml of air using the 20 ml syringe supplied;
10. Attach the Ventilation Bag to the Blue Tube Port Labeled #1 and begin ventilations.
 - a. **Lung Sounds are Positive and Stomach Sounds are Negative = Esophageal Placement** - continue ventilations. In this case, the Combitube has been properly placed into the esophagus (lung sounds with ventilation of Blue Tube Port #1). Under this condition, the second connecting tube (White Tube Port #2) may be used for removal of gastric fluids with the suction catheter provided in the kit;
 - b. **Lung Sounds are Negative and Stomach Sounds are Positive = Tracheal Placement** -- immediately begin ventilation through the shorter White Tube Port Labeled #2. Confirm tracheal ventilation by auscultation of lung sounds and absence of stomach sounds. In this case, the Combitube has been placed into the trachea;
 - c. **Both Lung Sounds and Stomach Sounds are Negative = Unknown Placement** - immediately deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe. The Combitube may have been advanced too far into the pharynx. Move the Combitube out 2 to 3 cm, reinflate both cuffs, attach

the Ventilation Bag to the Blue Tube Port Labeled #1, begin ventilations, and reassess placement according to a. and b. If neither lung sounds or stomach sounds are present:

- 1) Immediately deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe and remove the Combitube;
 - 2) Suction as needed;
 - 3) Insert oropharyngeal airway;
 - 4) Hyperventilate with Bag-Valve-Mask for a minimum of one (1) minute, reattempt insertion if appropriate;
11. Combitube insertion may be attempted no more than three (3) times. If unsuccessful after three (3) attempts, the patient should be ventilated with an oropharyngeal airway and Bag-Valve-Mask.
12. After successful Combitube insertion, continue patient ventilation as appropriate, reconfirm lung sounds at least every five (5) minutes.
13. The Combitube should be removed in the following cases:
- a. The patient develops a gag reflex;
 - b. The patient becomes conscious; or
 - c. Ventilation is inadequate due to device placement (note: check lung sounds equality – pneumothorax or tension pneumothorax may cause ventilation resistance. Combitube should be left in place in these cases if the patient is unconscious, unresponsive without a gag reflex.)
14. Combitube Removal Procedure:
- a. Position patient on side, use spinal precautions as indicated.
 - b. Deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe.
 - c. Remove the Combitube with suction.
 - d. Monitor the airway, respirations, tidal volume closely.

VI. EMT-1 COMBITUBE USE PROTOCOL SUMMARY:



Treatment Strategy:

1. Combitube insertion may be attempted no more than three (3) times. If unsuccessful after three (3) attempts, the patient should be ventilated with an oropharyngeal airway and Bag-Valve-Mask.
2. The Combitube should be removed in the following cases:
 - ◆ The patient develops a gag reflex;
 - ◆ The patient becomes conscious; or
 - ◆ Ventilation is inadequate due to device placement (note: check lung sounds equality - pneumothorax or tension pneumothorax may cause ventilation resistance. Combitube should be left in place in these cases if the patient is unconscious, unresponsive without a gag reflex.)
3. Combitube Removal Procedure:
 - ◆ Position patient on side, use spinal precautions as indicated, Deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe.
 - ◆ Remove the Combitube with suction.
 - ◆ Monitor the airway, respirations, tidal volume closely.

VII. EMT-1 AMBULANCE ARRIVAL/TRANSPORT PROCEDURES:

- A. If an EMT-1 Ambulance arrives for patient transport and EMT-1 ambulance personnel do not have valid EMT-1 Combitude accreditation, an EMT-1 that is Combitude accredited must accompany the patient in transport to the hospital. The EMT-1 that is Combitude accredited is responsible to maintain management and ventilation of the Combitude until exchange of care responsibility at the Hospital Emergency Department.**
- B. EMT-1 ambulance personnel are responsible for all other patient care treatment, procedures and decisions related to the patient transport.**

VIII. PARAMEDIC AMBULANCE ARRIVAL/TRANSPORT PROCEDURES:

- A. If a Paramedic ambulance arrives for patient transport, the Paramedic is responsible for all patient care treatment, procedures and decisions.**
- B. In cases where endotracheal medication administration is indicated and the Combitude is placed in the esophagus (lung sounds with ventilation of Blue Tube Port #1), the Paramedic may decide that endotracheal intubation is indicated. In most cases, endotracheal medication administration is indicated if the patient is in cardiopulmonary arrest and intravenous access is not successful.**
- C. If endotracheal intubation is required for administration of endotracheal medications, deflation of #1 Blue port to pharyngeal cuff with the 140 ml syringe is indicated leaving the Combitude in place with the distal cuff inflated (to protect the airway). The Paramedic then must endotracheal intubate the patient around the Combitude. If successful, deflation of the #2 White port to distal cuff with the 20 ml syringe is indicated and the Combitude may be removed.**
- D. The Department will carefully evaluate all cases of EMT-1 Combitude removal by Paramedic personnel.**

IX. DOCUMENTATION:

- A. For each case involving any EMT-1 Combitude insertion attempt, an EMT-1 Defibrillation/Combitude Record shall be completed and submitted to the EMT-1 Combitude Provider and the Kern County EMS Department.**
- B. The EMT-1 Defibrillation/Combitude Record shall be sent to the Kern County EMS Department within forty-eight (48) hours of the incident.**

C. The EMT-1 Combitube Provider shall conduct research on each Combitube case and shall submit quarterly reports to the Department with the following information:

- 1. Incident Date;**
- 2. Incident Call Time;**
- 3. Incident Location;**
- 4. Incident Map Coordinates;**
- 5. Patient Last & First Name;**
- 6. Unit Identification;**
- 7. Identification of the EMT-1 Combitube accredited personnel that attempted Combitube insertion (last and first name);**
- 8. Confirmation if the patient was in cardiopulmonary arrest, respiratory arrest only, or unconscious/unresponsive without a gag reflex;**
- 9. Total Number of Combitube Insertion Attempts;**
- 10. If Combitube insertion was successful or unsuccessful;**
- 11. The Combitube port used (#1 or #2) to provide on-going ventilation;**
- 12. Prehospital Outcome (Combitube left in place for transport, Combitube removed by Paramedic personnel, resuscitation discontinued at scene; and**
- 13. Hospital Emergency Department Outcome (deceased, admitted, discharged alive from Emergency Department, transferred to another facility alive from the Emergency Department).**

X. MEDICAL CONTROL:

- A. The EMT-1 Combitube Program is implemented and maintained under the authority of the Kern County EMS Department and the Kern County EMS Department Medical Director.**
- B. The Department is responsible to maintain oversight of the EMT-1 Combitube Program operations, EMT-1 Combitube Providers, EMT-1 Combitube accredited personnel and the EMT-1 Combitube Training Program.**

Enclosure One

EMT-1 Combitude Educational Curriculum

***EMT-1 Combitude Educational Curriculum
Initial Basic EMT-1 Combitude Training***

Course Description: *To be provided for initial EMT-1 Combitude training to be eligible for EMT-1 Combitude Accreditation*

Course Hours: *No less than Five hours of Didactic Lecture, Skills, Written Exam and Practical Exam Testing. A minimum 80% score is mandatory to pass the written exam within 2 attempts and the practical exam must be passed within 2 attempts. The student shall repeat the full initial training program if these requirements are not met.*

Instructor: *The Instructor must be authorized by the Kern County EMS Department as an EMT-1 Combitude Instructor.*

Student Number: *The instructor to student ratio shall not be more than 1 instructor to 20 students (1:20) for the didactic portion of the program and no more than 1 instructor to 10 students (1:10) for the skills practice and skills testing of the program.*

Equipment: *One Per Ten Students - Intubation Head Manikin, Adult Combitude Set, Small Adult Combitude Set, Stethoscope, Portable Oxygen with Liter Flow Valve/Regulator, Adult Bag-Valve-Mask, Adult Oropharyngeal Airway, Portable Suction.*

Supplies: *Photocopy of EMT-1 Combitude Policies and Procedures for each student, Roster, Skills Exam Check Sheet.*

Initial EMT-1 Combitube Training Program - Course Topic Outline:

◆ **Introduction/Overview:**

- **Instructor Name, Qualifications**
- **Overview of the Class:**
 - *100% Attendance of Hours is Required*
 - *EMT-1 Combitube Accreditation Requirements, Training Requirements, Required Skills Demonstration & Testing*
 - *Anatomy, Physiology, Assessment, Basic Airway Management Techniques*
 - *EMT-1 Combitube Policies and Procedures - Combitube Preparedness, Scene Arrival and Indications – EMT-1 Combitube Use Protocols - EMT-1 Combitube Use Protocol Summary (includes sequence of Combitube use, indications, contraindications, pre-oxygenation, insertion & assessment of placement)*
 - *EMT-1 Defibrillation/Combitube Report Completion*
 - *EMT-1 Combitube Skills Practice*
 - *EMT-1 Combitube Written Examination (25 Question Multiple Choice - 80% or Higher Within 2 Attempts) – Class must be Retaken in Full if Failed After 2 Attempts*
 - *EMT-1 Combitube Skills Examination (Demonstrate Proper Sequence of Basic Airway Management Skills, Assessment of Combitube Indications, Proper Combitube Insertion Technique and Combitube Management – within 2 Attempts) – Class must be Retaken in Full if Failed After 2 Attempts*

◆ **EMT-1 Combitube Policies and Procedures - Accreditation Requirements, Training Requirements, Required Skills Demonstration & Testing:**

- **Accreditation Requirements:**
 - *Submit verification that the individual is employed by an authorized EMT-1 Combitube Provider;*
 - *Submit an original EMT-1 Combitube Course Completion Record with a course completion date that is not more than three (3) months old (if greater than 3 months have elapsed, the individual will be required to complete the number of required skills demonstrations and testing – if greater than 1 year, the individual must re-complete the initial training program);*
 - *Have valid EMT-1 Certification issued by the Kern County EMS Department;*
 - *Complete the Department application record;*
 - *Meet any other Department requirements; and*
 - *Pay the required fee.*
 - *EMT-1 Combitube Accreditation is continuous as long as valid Kern County EMT-1 certification and required EMT-1 Combitube skills demonstrations and testing are maintained. The term of EMT-1 Combitube accreditation expires the same date as basic Kern County EMT-1 certification.*
- **Training Requirements:**
 - *Initial EMT-1 Combitube Training shall include a minimum of five (5) hours of training provided by an on-site, Department authorized instructor, in accordance with the course content specified in Enclosure One.*
 - *Each student must successfully pass a 25 question written exam (approved by the Department) with 80% or higher within two attempts and pass the skills examination by demonstrating competent Combitube utilization and skills within two attempts to receive an EMT-1 Combitube Course Completion Record.*
 - *Students that do not meet either of these requirements shall be required to retake the entire initial EMT-1 Combitube Training Program to be eligible to receive a course completion record.*

- *Each person that successfully completes the initial EMT-1 Combitude Training Program shall be issued an EMT-1 Combitude Course Completion Record. The Course Completion Record is not an EMT-1 Combitude Accreditation – the Course Completion and other required information must be referred to the Kern County EMS Department to obtain EMT-1 Combitude Accreditation.*
- **Required Skills Demonstration & Testing:**
 - *EMT-1 Combitude skills demonstrations and testing, in accordance with the process contained in Enclosure One, shall be completed for each EMT-1 Combitude accredited person in accordance with the following:*
 - *Monthly, for the first 6 month term, from the date of implementation of the EMT-1 Combitude program by the provider;*
 - *Every 4 months, on-going, after the first 6 months of implementation of the EMT-1 Combitude program by the provider.*
 - *After the six months of implementation of the EMT-1 Combitude program by the provider, individuals that complete initial EMT-1 Combitude training and accreditation shall successfully complete EMT-1 Combitude Skills demonstrations and testing monthly for two (2) consecutive months from the date of course completion, followed by the on-going EMT-1 Combitude provider requirements (every 4 months).*
 - *The EMT-1 Combitude Provider shall send a list with confirmation of successful EMT-1 Combitude skills demonstration and testing for each EMT-1 Combitude accredited person employed by the provider upon completion of each rotation of EMT-1 Combitude skills demonstration and testing. The list shall also include the names of any EMT-1 Combitude accredited individuals that did not successfully complete or attend the EMT-1 Combitude skills demonstration and testing as required.*
 - *EMT-1 Combitude accredited individuals that did not successfully complete or attend the EMT-1 Combitude skills demonstration and testing may be required to complete additional EMT-1 Combitude training and testing at the discretion of the Department.*
 - *In the case of EMT-1 Combitude demonstration and skills testing failure, the EMT-1 Combitude Instructor will provide additional review, education and repeat the skill proficiency examination once for any individual with unsatisfactory skills or knowledge.*
 - *If an EMT-1 Combitude accredited individual is unable to successfully pass EMT-1 Combitude demonstration and skills testing after two attempts, the EMT-1 Combitude Instructor shall immediately notify the EMT-1 Combitude Provider and provide verbal and written notice to the Department. An individual that is unable to demonstrate satisfactory Combitude skills or knowledge during skills proficiency examination after two attempts shall have Combitude accreditation temporarily suspended and shall not be permitted to provide EMT-Combitude scope of practice until approved by the Department. The Department Certificate Review Process Regulations may be used in this situation.*
 - *Valid Kern County EMT-1 certification and EMT-1 Combitude accreditation is required to provide EMT-1 Combitude scope of practice within Kern County. Any EMT-1 that provides EMT-1 Combitude scope of practice without valid EMT-1 Combitude accreditation will be at risk of EMT-1 certification suspension or revocation by the Department in accordance with Certificate Review Process Regulations.*
 - *EMT-1 Combitude accreditation may be placed on probation, suspended or revoked by the Department for non-compliance with EMT-1 Combitude skills demonstration and testing requirements. Non-compliance with EMT-1 Combitude skills demonstration and testing requirements shall not affect basic EMT-1 certification.*

- ◆ **Anatomy, Physiology, Assessment, Basic Airway Management Techniques:**
 - ◆ **Respiratory Anatomy:**
 - ◆ *Upper Airway – Oropharynx, Epiglottis, Trachea, Esophagus*
 - ◆ *Bronchi (right & left mainstem) and Bronchial Tree*
 - ◆ *Alveoli & Alveolar Capillaries*
 - ◆ **Respiratory Physiology:**
 - ◆ **Mechanics of Respiration:**
 - *Diaphragm Contracts – Negative Thoracic Pressure, Air rushes in.*
 - *Diaphragm Relaxes – Positive Thoracic Pressure, Air rushes out.*
 - *Emphasize that ventilation is air volume in and out*
 - *Respiratory Accessory Muscles Overview*
 - ◆ *Carbon Dioxide & Oxygen Gas Exchange in Alveoli & Alveoli Capillary Beds*
 - ◆ *Pulmonary Blood Flow to the Lungs is Required to transport Oxygen to the Cells and Carbon Dioxide away from the Cells*
 - ◆ **Respiratory Assessment (Demonstrate):**
 - ◆ *Airway Assessment*
 - ◆ *Respiratory Rate (chest rise & fall)*
 - ◆ *Respiratory Tidal Volume (amount of air flow in & out - feel with hand)*
 - ◆ *BOTH Rate and Tidal Volume are required to Ventilate*
 - ◆ *Conscious Level Assessment – Verbal, Pain, Gag – if no Gag Reflex with OPA = Unconscious/Unresponsive which is an indication for Combitube Use to protect the airway*
 - ◆ *Lung Sounds Assessment – Auscultation*
 - ◆ *Stomach Sounds Assessment - Auscultation*
 - ◆ **Basic Airway Management Techniques (demonstrate in sequence)**
 - ◆ *Manual Airway Control – Chin Lift/Jaw Thrust (if not effective & no airway – Head Tilt)*
 - ◆ *Oropharyngeal Airway (note watching for presence of Gag Reflex – sometimes delayed)*
 - ◆ *Suction (review indications and technique)*
 - ◆ *Ventilation with BVM & Hyperventilation (1 ventilation every 3 seconds – no faster)*
- ◆ **EMT-1 Combitube Policies and Procedures - Combitube Preparedness, Scene Arrival and Indications:**
 - ◆ *Preparedness: For Cardiac Arrest cases, one EMT-1 should be pre-assigned to operation of EMT-1 Defibrillation equipment (if accredited) and one EMT-1 Combitube accredited EMT-1 should be pre-assigned to Combitube insertion.*
 - ◆ *Scene Arrival: For all EMS incidents, Combitube equipment should be removed from responding apparatus and brought to the proximity of the patient.*
 - ◆ *All standard basic life support /EMT-1 patient assessment, care and treatment are to be used in conjunction with Combitube use. If obvious death criteria are present, resuscitation should not be started. Note – if Combitube inserted & resuscitation is discontinued, the Combitube must be left in place.*
 - ◆ *Indications for Combitube Use: EMT-1 Combitube accredited personnel at the scene shall be responsible to accurately assess the patient to determine if Combitube criteria are met.*

- ◆ *If the patient meets any of the following EMT-1 Combitube Patient Indications (a. all indications; or b. all indications), the Combitube shall be used; the EMT-D responsible for Combitube equipment shall prepare the patient insertion:*
- ◆ *Unconscious and unresponsive without a gag reflex:*
 - ◆ *Not a confirmed diabetic hypoglycemia case (with the exception of status generalized seizure activity due to hypoglycemia) or not a known opiate overdose case with the exception of any of the following:*
 - ◆ *ALS Ambulance response time will not be within 8 minutes to the scene at the time Combitube is confirmed to be indicated;*
 - ◆ *A BLS Ambulance has been sent; or*
 - ◆ *The patient condition deteriorates to respiratory arrest or cardiac arrest.*
 - ◆ *Adult Size Combitube - Height over five feet (152cm) or Small Adult Size Combitube - Height between 4 feet and 5.5 feet;*
 - ◆ *No known or suspected esophageal disease;*
 - ◆ *No known ingestion of a caustic substance;*
 - ◆ *No known or suspected airway obstruction; and*
 - ◆ *Paramedic Ambulance not expected to be on scene within two (2) minutes.*
- ◆ *Pulseless and Apneic or Agonal Respirations:*
 - ◆ *Adult Size Combitube - Height over five feet (152cm) or Small Adult Size Combitube - Height between 4 feet and 5.5 feet;*
 - ◆ *No known or suspected esophageal disease;*
 - ◆ *No known ingestion of a caustic substance;*
 - ◆ *No known or suspected airway obstruction; and*
 - ◆ *Paramedic Ambulance not expected to be on scene within two (2) minutes.*
- ◆ *If the patient does not meet EMT-1 Combitube Patient Indications (a. all indications; or b. all indications), the Combitube shall not be used and standard basic life support, EMT-Defibrillation or EMT-1 level care shall be provided as appropriate.*
- ◆ ***EMT-1 Combitube Policies and Procedures - EMT-1 Combitube Use Protocols:***
 - ◆ *Take appropriate body substance isolation precautions.*
 - ◆ *Assess patient and check carotid/femoral pulse. Begin CPR if pulseless and apply EMT-Defibrillation equipment if patient meets EMT-Defibrillation Patient Criteria.*
 - ◆ *If EMT-Defibrillation equipment detects a shockable rhythm, do not delay defibrillation. Administer up to three shocks according to protocol (3 shocks if no change, or less than 3 if change in shockable rhythm as indicated by EMT-Defibrillation equipment).*

- ◆ *If a shock is not indicated, or during or after the initial three shocks according to protocol, check for pulse. If no pulse, begin CPR.*
- ◆ *If patient meets EMT-1 Combitube Patient Indications, the team member responsible for insertion should have equipment prepared for insertion and shall insert the appropriate sized Combitube according to the following protocol.*
 - ◆ *Assess the patient for upper airway obstruction;*
 - ◆ *Position the patient properly (ideally supine) and hyperventilate the patient (1 ventilation every 3 seconds) for thirty (30) seconds;*
 - ◆ *Prior to insertion, test cuff integrity by inflating each cuff with the prescribed volume of air;*
 - ◆ *Lubricate tube with a water soluble lubricant to facilitate insertion;*
 - ◆ *The fluid deflector should be attached to deflect stomach contents away from rescue personnel. Attach the fluid deflector to the clear connecting lumen marked No. 2;*
 - ◆ *Lift the tongue and jaw upward with one hand;*
 - ◆ *With the other hand, hold the Combitube so that it curves in the same direction as the natural curvature of the pharynx. Maintain a mid-line position of the Combitube. Insert the tip into the mouth, advance in a downward curved movement until the patient's teeth lie between the two printed bands on the Combitube;*
 - ◆ **CAUTION: DO NOT FORCE THE COMBITUBE. If the tube does not advance easily, redirect it or withdraw and reinsert.**
 - ◆ *Inflate #1 Blue port to pharyngeal cuff with 100 ml of air using the 140 ml Blue color-coded syringe supplied. The large latex cuff will fill and may cause the Combitube to move slightly from the patient's mouth. This is to be expected;*
 - ◆ *Inflate #2 White port to distal cuff with 15 ml of air using the 20 ml syringe supplied;*
 - ◆ *Attach the Ventilation Bag to the Blue Tube Port Labeled #1 and begin ventilations.*
 - ◆ **Lung Sounds are Positive and Stomach Sounds are Negative = Esophageal Placement** - continue ventilations. *In this case, the Combitube has been properly placed into the esophagus (lung sounds with ventilation of Blue Tube Port #1). Under this condition, the second connecting tube (White Tube Port #2) may be used for removal of gastric fluids with the suction catheter provided in the kit;*
 - ◆ **Lung Sounds are Negative and Stomach Sounds are Positive = Tracheal Placement** -- immediately begin ventilation through the shorter White Tube Port Labeled #2. *Confirm tracheal ventilation by auscultation of lung sounds and absence of stomach sounds. In this case, the Combitube has been placed into the trachea;*
 - ◆ **Both Lung Sounds and Stomach Sounds are Negative = Unknown Placement** - immediately deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe. *The Combitube may have been advanced too far into the pharynx. Move the Combitube out 2 to 3 cm, reinflate both cuffs, attach the Ventilation Bag to the Blue Tube Port Labeled #1, begin ventilations, and reassess placement according to a. and b. If neither lung sounds or stomach sounds are present:*

- ◆ *Immediately deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe and remove the Combitube;*
- ◆ *Suction as needed;*
- ◆ *Insert oropharyngeal airway;*
- ◆ *Hyperventilate with Bag-Valve-Mask for a minimum of one (1) minute, reattempt insertion if appropriate;*
- ◆ *Combitube insertion may be attempted no more than three (3) times. If unsuccessful after three (3) attempts, the patient should be ventilated with an oropharyngeal airway and Bag-Valve-Mask.*
- ◆ *After successful Combitube insertion, continue patient ventilation as appropriate, reconfirm lung sounds at least every five (5) minutes.*
- ◆ *The Combitube should be removed in the following cases:*
 - ◆ *The patient develops a gag reflex;*
 - ◆ *The patient becomes conscious; or*
 - ◆ *Ventilation is inadequate due to device placement (note: check lung sounds equality – pneumothorax or tension pneumothorax may cause ventilation resistance. Combitube should be left in place in these cases if the patient is unconscious, unresponsive without a gag reflex.)*
- ◆ *Combitube Removal Procedure:*
 - ◆ *Position patient on side, use spinal precautions as indicated.*
 - ◆ *Deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe.*
 - ◆ *Remove the Combitube with suction.*
 - ◆ *Monitor the airway, respirations, tidal volume closely.*

◆ ***EMT-1 Ambulance Arrival/Transport Procedures:***

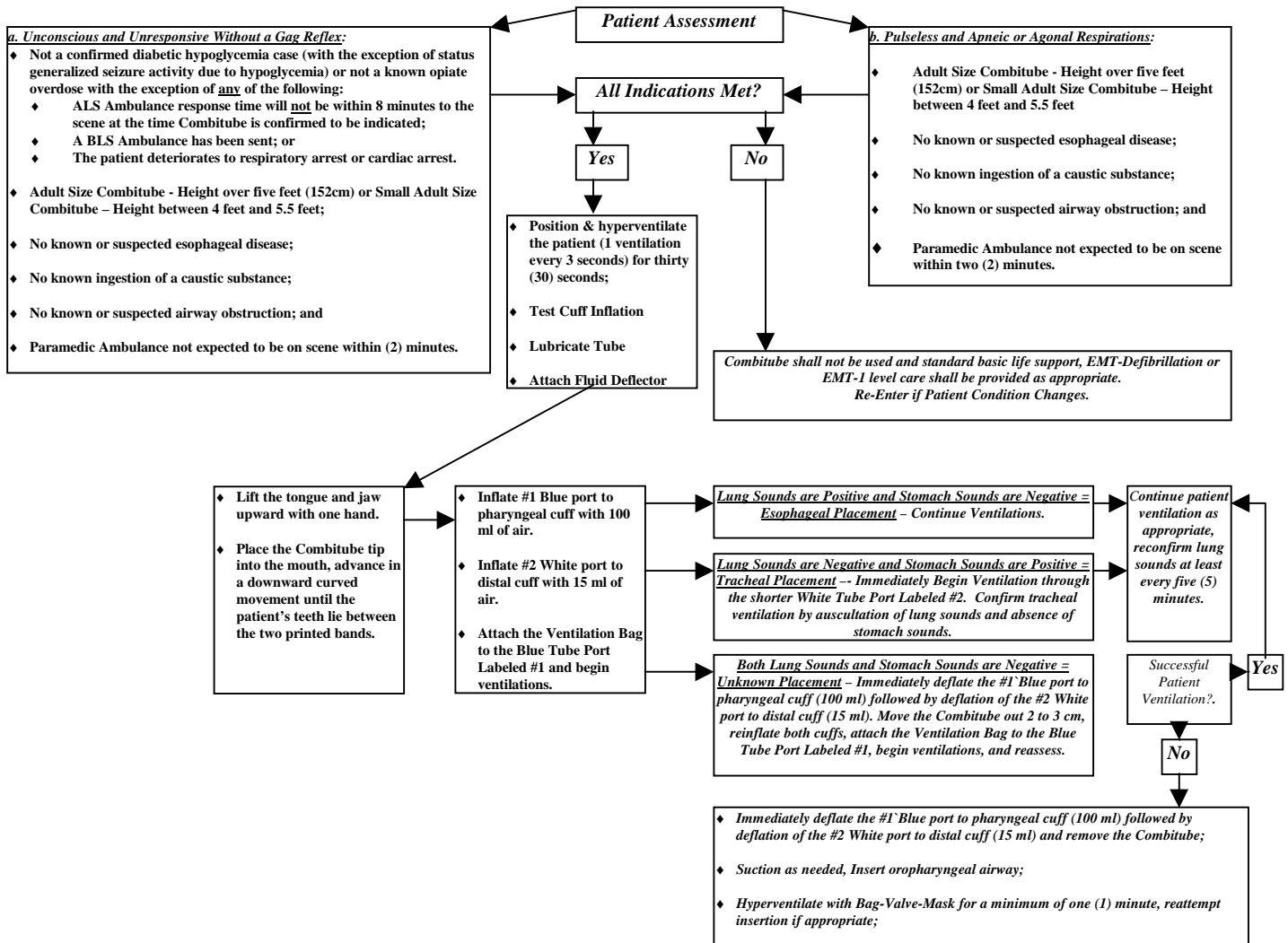
- ◆ *If an EMT-1 Ambulance arrives for patient transport and EMT-1 ambulance personnel do not have valid EMT-1 Combitube accreditation, an EMT-1 that is Combitube accredited must accompany the patient in transport to the hospital. The EMT-1 that is Combitube accredited is responsible to maintain management and ventilation of the Combitube until exchange of care responsibility at the Hospital Emergency Department.*
- ◆ *EMT-1 ambulance personnel are responsible for all other patient care treatment, procedures and decisions related to the patient transport.*

◆ ***Paramedic Ambulance Arrival/Transport Procedures:***

- ◆ *If a Paramedic ambulance arrives for patient transport, the Paramedic is responsible for all patient care treatment, procedures and decisions.*

- ◆ *In cases where endotracheal medication administration is indicated and the Combitube is placed in the esophagus (lung sounds with ventilation of Blue Tube Port #1), the Paramedic may decide that endotracheal intubation is indicated. In most cases, endotracheal medication administration is indicated if the patient is in cardiopulmonary arrest and intravenous access is not successful.*
- ◆ *If endotracheal intubation is required for administration of endotracheal medications, deflation of #1 Blue port to pharyngeal cuff with the 140 ml syringe is indicated leaving the Combitube in place with the distal cuff inflated (to protect the airway). The Paramedic then must endotracheal intubate the patient around the Combitube. If successful, deflation of the #2 White port to distal cuff with the 20 ml syringe is indicated and the Combitube may be removed.*
- ◆ *The Department will carefully evaluate all cases of EMT-1 Combitube removal by Paramedic personnel.*

◆ **EMT-1 Combitube Policies and Procedures - EMT-1 Combitube Use Protocol Summary:**



Treatment Strategy:

2. Combitube insertion may be attempted no more than three (3) times. If unsuccessful after three (3) attempts, the patient should be ventilated with an oropharyngeal airway and Bag-Valve-Mask.
2. The Combitube should be removed in the following cases:
 - ◆ The patient develops a gag reflex;
 - ◆ The patient becomes conscious; or
 - ◆ Ventilation is inadequate due to device placement (note: check lung sounds equality – pneumothorax or tension pneumothorax may cause ventilation resistance. Combitube should be left in place in these cases if the patient is unconscious, unresponsive without a gag reflex.)
3. Combitube Removal Procedure:
 - ◆ Position patient on side, use spinal precautions as indicated, Deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe.
 - ◆ Remove the Combitube with suction.
 - ◆ Monitor the airway, respirations, tidal volume closely.

◆ ***EMT-1 Defibrillation/Combitube Report Completion:***

- ◆ ***For each case involving any EMT-1 Combitube insertion attempt, an EMT-1 Defibrillation/Combitube Record shall be completed and submitted to the EMT-1 Combitube Provider and the Kern County EMS Department.***
- ◆ ***The EMT-1 Defibrillation/Combitube Record shall be sent to the Kern County EMS Department within forty-eight (48) hours of the incident.***

EMT-1 Defibrillation/Combitube Report

(Completed for each Patient Case involving EMT-Defibrillation Attachment or Attempted Combitube Insertion)

Date: _____ Unit ID: _____ Agency ID: _____	Patient Information: Name (last, first, MI): _____ DOB: _____ Address: _____ Sex: _____ City/State/Zip: _____ Weight: _____ Lbs. Kg. Age: _____ Yrs Mths Days (circle one) Height: _____																																																
Times: Call Time: _____ Enroute: _____ On-Scene: _____ Pt Contact: _____ Defib Attach: _____ Combi Insert: _____ Amb On Scene: _____ Pt. Trans Start: _____	Incident Information: Map Coordinates: _____ Location: _____ Chief Complaint or Problem: _____ Trauma Origin: Yes No (circle one) Medical Origin: Yes No (circle one) Unresponsive (no Gag): Yes No (circle one) Respiratory Arrest: Yes No (circle one) Cardiac Arrest: Yes No (circle one) CPR Prior: Yes No (circle one) Down Time Prior to CPR: _____ Problem Onset Time: _____																																																
Combitube (Complete only if Combitube use/attempted by EMT-1 Combitube Personnel):																																																	
Indication(s) Met: <input type="checkbox"/> Unconscious/Unresponsive No Gag Reflex <input type="checkbox"/> Respiratory or Cardiac Arrest Combitube Size: <input type="checkbox"/> Adult <input type="checkbox"/> Small Adult Tube Ventilated: <input type="checkbox"/> #1 (Blue) Esophageal <input type="checkbox"/> #2 (White) Tracheal Prehospital Outcome: <input type="checkbox"/> Removed by EMT-1 Combitube Staff <input type="checkbox"/> Removed by Paramedic after ET Intubation <input type="checkbox"/> Removed by Paramedic before ET Intubation <input type="checkbox"/> Left in Place for Transport @ BLS Level <input type="checkbox"/> Left in Place for Transport @ ALS Level <input type="checkbox"/> Resuscitation Discontinued @ Scene	Successful: Yes No (circle one) If Not Successful – Potential Reason(s): _____ _____ _____ # of Attempts: _____ Attempt By: _____ Comments: _____ _____ _____ Hospital ED Outcome: <input type="checkbox"/> Deceased in ED <input type="checkbox"/> Admitted Alive to Hospital <input type="checkbox"/> Discharged Alive from ED <input type="checkbox"/> Transferred Alive to other Hospital																																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: left;">Vital Signs:</th> </tr> <tr> <th style="width: 15%;">Time</th> <th style="width: 15%;">B/P</th> <th style="width: 15%;">Pulse</th> <th style="width: 15%;">Resp</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>		Vital Signs:				Time	B/P	Pulse	Resp																																								
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Medical History: _____ _____ _____ Rx Meds: _____ _____ _____																																																	
EMT-1 Defibrillation (Complete only if EMT-1 Defibrillation Equipment attached to Patient): AED Assessment: Total # Shocks Delivered: _____ Comments: _____ <input type="checkbox"/> No Shock Advised AED Equip Op. By: _____ <input type="checkbox"/> Shock Advised, not Delivered _____ <input type="checkbox"/> Shock Advised & Delivered Complications: _____ Prehospital Outcome: <input type="checkbox"/> No Perfusion Change, No Transport _____ <input type="checkbox"/> No Perfusion Change, Transported _____ <input type="checkbox"/> Pulses Regained After AED Use _____ <input type="checkbox"/> Pulses Regained after ALS Care _____																																																	
Narrative (In Sequence Actions Summary) _____ _____ _____ _____																																																	
Hospital: _____ Completed By (print name): _____ Ambulance: _____ Amb Unit ID: _____ Completed By - Signature: _____ <p style="text-align: center; font-size: small;">Send (1) Copy to Kern County EMS, (1) Copy to Employer – within 48 hours of the Incident</p>																																																	

- ◆ *EMT-1 Combitube Skills Practice – (1) Instructor to (10) Student Ratio – Provide Scenario - Demonstrate & Practice Proper Sequence of Basic Airway Management Skills, Assessment of Combitube Indications, Proper Combitube Insertion Technique and Combitube Management. Allow enough time for each individual student to complete at least twice during the class.*

- ◆ *EMT-1 Combitube Written Examination & Correction:*
 - ◆ *EMT-1 Combitube Written Examination (25 Question Multiple Choice - 80% or Higher Within 2 Attempts) – Class must be Retaken in Full if Failed After 2 Attempts. Instruct students to pick the most correct answer and make all answers on the answer sheet.*

◆ **EMT-1 Combitube Skills Examination:**

- ◆ EMT-1 Combitube Skills Examination - (1) Instructor to (10) Student Ratio – Provide Scenario. The student shall (within 2 attempts):
 - ◆ Demonstrate Proper Sequence of Basic Airway Management Skills
 - ◆ Proper Assessment of Combitube Indication
 - ◆ Proper Combitube Insertion Technique
 - ◆ Proper Combitube Management – within 2 Attempts)
- ◆ Class must be Retaken in Full if Failed After 2 Attempts.

Student Name: _____

Skills Exam Date: _____

Instructor: _____

- Manual Airway Control – Chin Lift/Jaw Thrust (if not effective & no airway – Head Tilt)
- Oropharyngeal Airway (note watching for presence of Gag Reflex – sometimes delayed)
- Suction (review indications and technique)
- Ventilation with BVM & Hyperventilation (1 ventilation every 3 seconds – no faster)
- Indications for Combitube Use: Unconscious and unresponsive without a gag reflex:
 - Not a confirmed diabetic hypoglycemia case (with the exception of status generalized seizure activity due to hypoglycemia) or not a known opiate overdose case with the exception of any of the following:
 - ◆ ALS Ambulance response time will not be within 8 minutes to the scene at the time Combitube is confirmed to be indicated;
 - ◆ A BLS Ambulance has been sent; or
 - ◆ The patient condition deteriorates to respiratory arrest or cardiac arrest.
 - Adult Size Combitube - Height over five feet (152cm) or Small Adult Size Combitube - Height between 4 feet and 5.5 feet;
 - No known or suspected esophageal disease;
 - No known ingestion of a caustic substance;
 - No known or suspected airway obstruction; and
 - Paramedic Ambulance not expected to be on scene within two (2) minutes.
- Indications for Combitube Use: Pulseless and Apneic or Agonal Respirations:
 - Adult Size Combitube - Height over five feet (152cm) or Small Adult Size Combitube - Height between 4 feet and 5.5 feet;
 - No known or suspected esophageal disease;
 - No known ingestion of a caustic substance;
 - No known or suspected airway obstruction; and
 - Paramedic Ambulance not expected to be on scene within two (2) minutes.
- Take appropriate body substance isolation precautions.
- Assess patient and check carotid/femoral pulse. Begin CPR if pulseless and apply EMT-Defibrillation equipment if patient meets EMT-Defibrillation Patient Criteria.
- Assess the patient for upper airway obstruction;
- Position the patient properly (ideally supine) and hyperventilate the patient (1 ventilation every 3 seconds) for thirty (30) seconds;
- Prior to insertion, test cuff integrity by inflating each cuff with the prescribed volume of air;
- Lubricate tube with a water soluble lubricant to facilitate insertion;
- The fluid deflector should be attached to deflect stomach contents away from rescue personnel. Attach the fluid deflector to the clear connecting lumen marked No. 2;
- Lift the tongue and jaw upward with one hand;
- With the other hand, hold the Combitube so that it curves in the same direction as the natural curvature of the pharynx. Maintain a mid-line position of the Combitube. Insert the tip into the mouth, advance in

- a downward curved movement until the patient's teeth lie between the two printed bands on the Combitube;*
- ❑ *Inflate #1 Blue port to pharyngeal cuff with 100 ml of air using the 140 ml Blue color-coded syringe supplied. The large latex cuff will fill and may cause the Combitube to move slightly from the patient's mouth. This is to be expected;*
 - ❑ *Inflate #2 White port to distal cuff with 15 ml of air using the 20 ml syringe supplied;*
 - ❑ *Attach the Ventilation Bag to the Blue Tube Port Labeled #1 and begin ventilations.*
 - *Lung Sounds are Positive and Stomach Sounds are Negative = Esophageal Placement - continue ventilations. In this case, the Combitube has been properly placed into the esophagus (lung sounds with ventilation of Blue Tube Port #1). Under this condition, the second connecting tube (White Tube Port #2) may be used for removal of gastric fluids with the suction catheter provided in the kit;*
 - *Lung Sounds are Negative and Stomach Sounds are Positive = Tracheal Placement -- immediately begin ventilation through the shorter White Tube Port Labeled #2. Confirm tracheal ventilation by auscultation of lung sounds and absence of stomach sounds. In this case, the Combitube has been placed into the trachea;*
 - *Both Lung Sounds and Stomach Sounds are Negative = Unknown Placement - immediately deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe. The Combitube may have been advanced too far into the pharynx. Move the Combitube out 2 to 3 cm, reinflate both cuffs, attach the Ventilation Bag to the Blue Tube Port Labeled #1, begin ventilations, and reassess placement according to a. and b.*
 - ❑ *If neither lung sounds or stomach sounds are present:*
 - *Immediately deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe and remove the Combitube;*
 - *Suction as needed;*
 - *Insert oropharyngeal airway;*
 - *Hyperventilate with Bag-Valve-Mask for a minimum of one (1) minute, reattempt insertion if appropriate;*
 - ❑ *After successful Combitube insertion, continue patient ventilation as appropriate, reconfirm lung sounds at least every five (5) minutes.*

◆ **Course Conclusion:**

Issue Course Completion Certificates at Class or by Mail – Obtain student feedback regarding the course. Develop class outcome report to the Department. Counsel students that did not pass the program.

EMT-1 Combitube Educational Curriculum
EMT-1 Combitube Training – Skills Demonstration & Testing

Course Description: *To be provided for on-going EMT-1 Combitube training to maintain EMT-1 Combitube Accreditation*

Course Hours: *Variable, based on group size & performance. The practical exam must be passed within 2 attempts. The instructor shall immediately report the student name to the Department if the EMT-1 Combitube Skills exam is not passed by any person that is EMT-1 Combitube Accredited.*

Instructor: *The Instructor must be authorized by the Kern County EMS Department as an EMT-1 Combitube Instructor.*

Student Number: *The instructor to student ratio shall not be more than 1 instructor to 10 students (1:10) for the skills practice and skills testing.*

Equipment: *One Per Ten Students - Intubation Head Manikin, Adult Combitube Set, Small Adult Combitube Set, Stethoscope, Portable Oxygen with Liter Flow Valve/Regulator, Adult Bag-Valve-Mask, Adult Oropharyngeal Airway, Portable Suction.*

Supplies: *Roster, Skills Exam Check Sheet*

Topic Outline:

- ◆ ***Basic Airway Management Techniques (demonstrate in sequence)***
 - ◆ *Manual Airway Control – Chin Lift/Jaw Thrust (if not effective & no airway – Head Tilt)*
 - ◆ *Oropharyngeal Airway (note watching for presence of Gag Reflex – sometimes delayed)*
 - ◆ *Suction (review indications and technique)*
 - ◆ *Ventilation with BVM & Hyperventilation (1 ventilation every 3 seconds – no faster)*

- ◆ ***EMT-1 Combitube Policies and Procedures - Combitube Preparedness, Scene Arrival and Indications:***
 - ◆ *Preparedness: For Cardiac Arrest cases, one EMT-1 should be pre-assigned to operation of EMT-1 Defibrillation equipment (if accredited) and one EMT-1 Combitube accredited EMT-1 should be pre-assigned to Combitube insertion.*
 - ◆ *Scene Arrival: For all EMS incidents, Combitube equipment should be removed from responding apparatus and brought to the proximity of the patient.*
 - ◆ *All standard basic life support /EMT-1 patient assessment, care and treatment are to be used in conjunction with Combitube use. If obvious death criteria are present, resuscitation should not be started. Note – if Combitube inserted & resuscitation is discontinued, the Combitube must be left in place.*

- ◆ *Indications for Combitube Use: EMT-1 Combitube accredited personnel at the scene shall be responsible to accurately assess the patient to determine if Combitube criteria are met.*
- ◆ *If the patient meets any of the following EMT-1 Combitube Patient Indications (a. all indications; or b. all indications), the Combitube shall be used; the EMT-D responsible for Combitube equipment shall prepare the patient insertion:*
- ◆ *Unconscious and unresponsive without a gag reflex:*
 - ◆ *Not a confirmed diabetic hypoglycemia case (with the exception of status generalized seizure activity due to hypoglycemia) or not a known opiate overdose case with the exception of any of the following:*
 - ◆ *ALS Ambulance response time will not be within 8 minutes to the scene at the time Combitube is confirmed to be indicated;*
 - ◆ *A BLS Ambulance has been sent; or*
 - ◆ *The patient condition deteriorates to respiratory arrest or cardiac arrest.*
 - ◆ *Adult Size Combitube - Height over five feet (152cm) or Small Adult Size Combitube - Height between 4 feet and 5.5 feet;*
 - ◆ *No known or suspected esophageal disease;*
 - ◆ *No known ingestion of a caustic substance;*
 - ◆ *No known or suspected airway obstruction; and*
 - ◆ *Paramedic Ambulance not expected to be on scene within two (2) minutes.*
- ◆ *Pulseless and Apneic or Agonal Respirations:*
 - ◆ *Adult Size Combitube - Height over five feet (152cm) or Small Adult Size Combitube - Height between 4 feet and 5.5 feet;*
 - ◆ *No known or suspected esophageal disease;*
 - ◆ *No known ingestion of a caustic substance;*
 - ◆ *No known or suspected airway obstruction; and*
 - ◆ *Paramedic Ambulance not expected to be on scene within two (2) minutes.*
- ◆ *If the patient does not meet EMT-1 Combitube Patient Indications (a. all indications; or b. all indications), the Combitube shall not be used and standard basic life support, EMT-Defibrillation or EMT-1 level care shall be provided as appropriate.*
- ◆ ***EMT-1 Combitube Policies and Procedures - EMT-1 Combitube Use Protocols:***
 - ◆ *Take appropriate body substance isolation precautions.*
 - ◆ *Assess patient and check carotid/femoral pulse. Begin CPR if pulseless and apply EMT-Defibrillation equipment if patient meets EMT-Defibrillation Patient Criteria.*

- ◆ *If EMT-Defibrillation equipment detects a shockable rhythm, do not delay defibrillation. Administer up to three shocks according to protocol (3 shocks if no change, or less than 3 if change in shockable rhythm as indicated by EMT-Defibrillation equipment).*
- ◆ *If a shock is not indicated, or during or after the initial three shocks according to protocol, check for pulse. If no pulse, begin CPR.*
- ◆ *If patient meets EMT-1 Combitube Patient Indications, the team member responsible for insertion should have equipment prepared for insertion and shall insert the appropriate sized Combitube according to the following protocol.*
 - ◆ *Assess the patient for upper airway obstruction;*
 - ◆ *Position the patient properly (ideally supine) and hyperventilate the patient (1 ventilation every 3 seconds) for thirty (30) seconds;*
 - ◆ *Prior to insertion, test cuff integrity by inflating each cuff with the prescribed volume of air;*
 - ◆ *Lubricate tube with a water soluble lubricant to facilitate insertion;*
 - ◆ *The fluid deflector should be attached to deflect stomach contents away from rescue personnel. Attach the fluid deflector to the clear connecting lumen marked No. 2;*
 - ◆ *Lift the tongue and jaw upward with one hand;*
 - ◆ *With the other hand, hold the Combitube so that it curves in the same direction as the natural curvature of the pharynx. Maintain a mid-line position of the Combitube. Insert the tip into the mouth, advance in a downward curved movement until the patient's teeth lie between the two printed bands on the Combitube;*
 - ◆ *CAUTION: DO NOT FORCE THE COMBITUBE. If the tube does not advance easily, redirect it or withdraw and reinsert.*
 - ◆ *Inflate #1 Blue port to pharyngeal cuff with 100 ml of air using the 140 ml Blue color-coded syringe supplied. The large latex cuff will fill and may cause the Combitube to move slightly from the patient's mouth. This is to be expected;*
 - ◆ *Inflate #2 White port to distal cuff with 15 ml of air using the 20 ml syringe supplied;*
 - ◆ *Attach the Ventilation Bag to the Blue Tube Port Labeled #1 and begin ventilations.*
 - ◆ *Lung Sounds are Positive and Stomach Sounds are Negative = Esophageal Placement - continue ventilations. In this case, the Combitube has been properly placed into the esophagus (lung sounds with ventilation of Blue Tube Port #1). Under this condition, the second connecting tube (White Tube Port #2) may be used for removal of gastric fluids with the suction catheter provided in the kit;*
 - ◆ *Lung Sounds are Negative and Stomach Sounds are Positive = Tracheal Placement -- immediately begin ventilation through the shorter White Tube Port Labeled #2. Confirm tracheal ventilation by auscultation of lung sounds and absence of stomach sounds. In this case, the Combitube has been placed into the trachea;*
 - ◆ *Both Lung Sounds and Stomach Sounds are Negative = Unknown Placement - immediately deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe. The Combitube may have been advanced too far into the pharynx. Move the Combitube out 2 to 3 cm, reinflate both cuffs, attach the Ventilation Bag to the Blue Tube Port*

Labeled #1, begin ventilations, and reassess placement according to a. and b. If neither lung sounds or stomach sounds are present:

- ◆ *Immediately deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe and remove the Combitube;*
- ◆ *Suction as needed;*
- ◆ *Insert oropharyngeal airway;*
- ◆ *Hyperventilate with Bag-Valve-Mask for a minimum of one (1) minute, reattempt insertion if appropriate;*
- ◆ *Combitube insertion may be attempted no more than three (3) times. If unsuccessful after three (3) attempts, the patient should be ventilated with an oropharyngeal airway and Bag-Valve-Mask.*

- ◆ *After successful Combitube insertion, continue patient ventilation as appropriate, reconfirm lung sounds at least every five (5) minutes.*

- ◆ *The Combitube should be removed in the following cases:*
 - ◆ *The patient develops a gag reflex;*
 - ◆ *The patient becomes conscious; or*
 - ◆ *Ventilation is inadequate due to device placement (note: check lung sounds equality – pneumothorax or tension pneumothorax may cause ventilation resistance. Combitube should be left in place in these cases if the patient is unconscious, unresponsive without a gag reflex.)*

- ◆ *Combitube Removal Procedure:*
 - ◆ *Position patient on side, use spinal precautions as indicated.*
 - ◆ *Deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe.*
 - ◆ *Remove the Combitube with suction.*
 - ◆ *Monitor the airway, respirations, tidal volume closely.*

◆ **EMT-1 Combitube Skills Examination:**

- ◆ EMT-1 Combitube Skills Examination - (1) Instructor to (10) Student Ratio – Provide Scenario. The student shall (within 2 attempts):
 - ◆ Demonstrate Proper Sequence of Basic Airway Management Skills
 - ◆ Proper Assessment of Combitube Indication
 - ◆ Proper Combitube Insertion Technique
 - ◆ Proper Combitube Management – within 2 Attempts)
- ◆ Class must be Retaken in Full if Failed After 2 Attempts.

Student Name: _____

Skills Exam Date: _____

Instructor: _____

- Manual Airway Control – Chin Lift/Jaw Thrust (if not effective & no airway – Head Tilt)
- Oropharyngeal Airway (note watching for presence of Gag Reflex – sometimes delayed)
- Suction (review indications and technique)
- Ventilation with BVM & Hyperventilation (1 ventilation every 3 seconds – no faster)
- Indications for Combitube Use: Unconscious and unresponsive without a gag reflex:
 - Not a confirmed diabetic hypoglycemia case (with the exception of status generalized seizure activity due to hypoglycemia) or not a known opiate overdose case with the exception of any of the following:
 - ◆ ALS Ambulance response time will not be within 8 minutes to the scene at the time Combitube is confirmed to be indicated;
 - ◆ A BLS Ambulance has been sent; or
 - ◆ The patient condition deteriorates to respiratory arrest or cardiac arrest.
 - Adult Size Combitube - Height over five feet (152cm) or Small Adult Size Combitube - Height between 4 feet and 5.5 feet;
 - No known or suspected esophageal disease;
 - No known ingestion of a caustic substance;
 - No known or suspected airway obstruction; and
 - Paramedic Ambulance not expected to be on scene within two (2) minutes.
- Indications for Combitube Use: Pulseless and Apneic or Agonal Respirations:
 - Adult Size Combitube - Height over five feet (152cm) or Small Adult Size Combitube - Height between 4 feet and 5.5 feet;
 - No known or suspected esophageal disease;
 - No known ingestion of a caustic substance;
 - No known or suspected airway obstruction; and
 - Paramedic Ambulance not expected to be on scene within two (2) minutes.
- Take appropriate body substance isolation precautions.
- Assess patient and check carotid/femoral pulse. Begin CPR if pulseless and apply EMT-Defibrillation equipment if patient meets EMT-Defibrillation Patient Criteria.
- Assess the patient for upper airway obstruction;
- Position the patient properly (ideally supine) and hyperventilate the patient (1 ventilation every 3 seconds) for thirty (30) seconds;
- Prior to insertion, test cuff integrity by inflating each cuff with the prescribed volume of air;
- Lubricate tube with a water soluble lubricant to facilitate insertion;
- The fluid deflector should be attached to deflect stomach contents away from rescue personnel. Attach the fluid deflector to the clear connecting lumen marked No. 2;
- Lift the tongue and jaw upward with one hand;
- With the other hand, hold the Combitube so that it curves in the same direction as the natural curvature of the pharynx. Maintain a mid-line position of the Combitube. Insert the tip into the mouth, advance in

- a downward curved movement until the patient's teeth lie between the two printed bands on the Combitube;*
- ❑ *Inflate #1 Blue port to pharyngeal cuff with 100 ml of air using the 140 ml Blue color-coded syringe supplied. The large latex cuff will fill and may cause the Combitube to move slightly from the patient's mouth. This is to be expected;*
 - ❑ *Inflate #2 White port to distal cuff with 15 ml of air using the 20 ml syringe supplied;*
 - ❑ *Attach the Ventilation Bag to the Blue Tube Port Labeled #1 and begin ventilations.*
 - *Lung Sounds are Positive and Stomach Sounds are Negative = Esophageal Placement - continue ventilations. In this case, the Combitube has been properly placed into the esophagus (lung sounds with ventilation of Blue Tube Port #1). Under this condition, the second connecting tube (White Tube Port #2) may be used for removal of gastric fluids with the suction catheter provided in the kit;*
 - *Lung Sounds are Negative and Stomach Sounds are Positive = Tracheal Placement -- immediately begin ventilation through the shorter White Tube Port Labeled #2. Confirm tracheal ventilation by auscultation of lung sounds and absence of stomach sounds. In this case, the Combitube has been placed into the trachea;*
 - *Both Lung Sounds and Stomach Sounds are Negative = Unknown Placement - immediately deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe. The Combitube may have been advanced too far into the pharynx. Move the Combitube out 2 to 3 cm, reinflate both cuffs, attach the Ventilation Bag to the Blue Tube Port Labeled #1, begin ventilations, and reassess placement according to a. and b.*
 - ❑ *If neither lung sounds or stomach sounds are present:*
 - *Immediately deflate the #1 Blue port to pharyngeal cuff with the 140 ml syringe followed by deflation of the #2 White port to distal cuff with the 20 ml syringe and remove the Combitube;*
 - *Suction as needed;*
 - *Insert oropharyngeal airway;*
 - *Hyperventilate with Bag-Valve-Mask for a minimum of one (1) minute, reattempt insertion if appropriate;*
 - ❑ *After successful Combitube insertion, continue patient ventilation as appropriate, reconfirm lung sounds at least every five (5) minutes.*

Enclosure Two

EMT-1 Defibrillation/Combitube Report

EMT-1 Combitube Educational Materials

