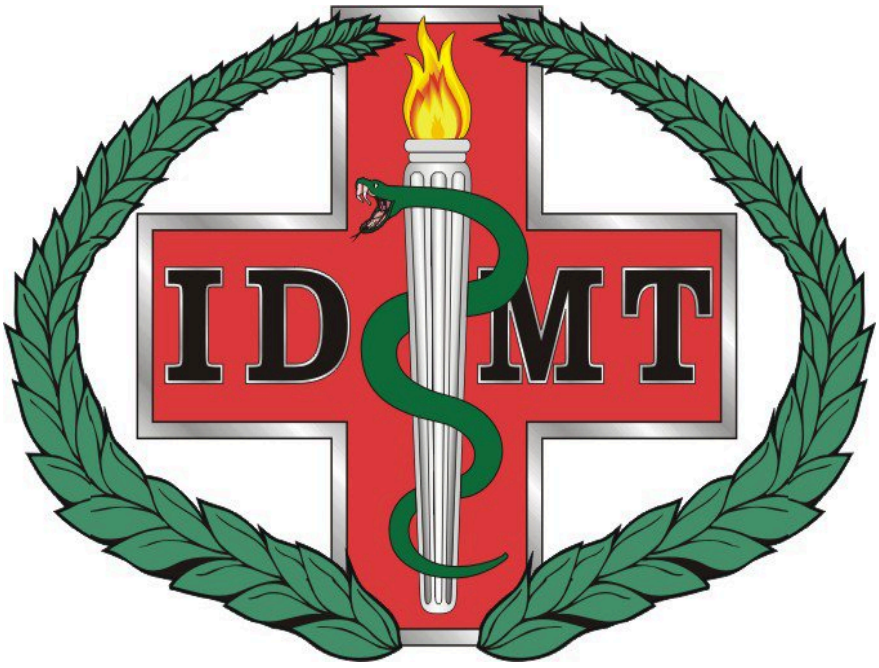
QTP4N0X1C-9
02 July 2015
Certified Current 11 July 2022

AEROSPACE MEDICAL SERVICE SPECIALTY
INDEPENDENT DUTY MEDICAL TECHNICIAN

EMERGENCY MEDICINE PROCEDURES



Volume 9

TOTAL FORCE, TOTAL CARE – EVERYTIME, ANYWHERE

383d TRAINING SQUADRON/XUFB
INDEPENDENT DUTY MEDICAL TECHNICIAN COURSE
3488 Garden Ave – Anderson Hall, Rm 331
JBSA-Fort Sam Houston, TX 78324

QTP 4N0X1C-9

AEROSPACE MEDICAL SERVICE SPECIALTY - INDEPENDENT DUTY MEDICAL TECHNICAN

Volume 9 Emergency Medicine Procedures

TABLE OF CONTENTS

Supersedes QTP 4N0X1C-9, December 2014.

INTRODUCTION

1. These Qualification Training Packages (QTPs) were developed to enhance on-the-job training for Aerospace Medical Service Specialist, Independent Duty Medical Technician (IDMT), 4N0X1C personnel. As a trainer, the QTPs provide you with the breakdown of tasks into teachable elements. The teachable elements will help you to guide the trainee toward sufficient proficiency for task performance ***without assistance***. QTPs are also used by the task certifiers/certification official to evaluate trainees concerning tasks which need third-party certification.

2. Review each volume and identify which modules of QTPs are needed for the trainee's job position. Core task items are identified with the number "5" on the STS Column 2; these items are the minimum mandatory skills which are required for all 4N0X1 personnel to be proficient in performing. You have the flexibility to arrange training for each module in the order that you decide.

3. Review the subject-area tasks in each module with the trainee. Direct the trainee to review the training references to gain a better understanding of the objective for each module. If the trainee has any questions about the objective, clarify the behavior that is expected in the objective. Review the performance checklist with the trainee, and allow sufficient time to learn each step (some objectives may take longer to teach). Remember--the objective of each QTP is to standardize training and to allow sufficient time for the trainee to learn each task thoroughly in order to perform the task ***without assistance***.

4. When the trainee receives sufficient training and is ready to be evaluated on an objective, follow the evaluation instructions. The performance checklist must be used as you evaluate each task objective. When the trainee successfully accomplishes the objective, document task completion appropriately in the training records.

5. The QTP task completion is to be annotated on AF Form 1098, *Special Task Certification and Recurring Training*, filed in training folder. **NOTE:** The individual check lists are **not** filed in each member's training folder. A master checklist is filed in part 3, section B of the master training plan (MTP) six-part training folder.

6. If the trainee does not accomplish the objective, review the areas which need remediation. Conduct a feedback concerning each module with the trainee, and document appropriately in the training records. As the trainer, once you are satisfied that the trainee is qualified to perform the task, he/she will be re-evaluated until the objective is met.

7. If the task which is being trained requires third party certification by a task certifier/certifying official, the trainer must first ensure that the trainee is qualified to perform the task ***without assistance***. The trainee then will be evaluated by a task certifier/certifying official. The tasks which require third party certification are denoted with a "^" in Column 3E of the Career Field Education and Training Plan (CFETP). The qualification of training then is documented appropriately in the training folder.

8. The QTPs are a necessary tool for standardizing refresher/sustainment training. Such standardization will benefit the CFETP training concept throughout each member's career. These documents also will be utilized for assessing/certifying the Aerospace Medical Service Specialist, IDMT, 4N0X1C, each time that he/she is arrives to a new duty station. The QTP developers' goal is to publish a usable document for certifying officials, trainers, and trainees for the purpose of enhancing on-the-job training for Aerospace Medical Service Specialist, IDMT personnel. We value your first hand expertise and we encourage your feedback. Direct all inquiries to:

Independent Duty Medical Technician Course

383d Training Squadron/XUFB
3488 Garden Ave, Anderson Hall Rm 331 Voice: DSN 420-4670
JBSA-Fort Sam Houston, TX 78234 Comm: (210) 808-4670

Volume 9 **Module 1.a**

CRICOIDTHYROIDOTOMY

SUBJECT AREA: Independent Duty Medical Technician (IDMT)

TASK NAMES: Emergency Medicine Procedures; Perform Airway Management

CFETP/STS REFERENCES: 10.11.3.1.3.

EQUIPMENT REQUIRED:

Needle Cricothyroidotomy

1. Personal Protective Equipment
2. 14 or 12 gauge sheathed needle catheter
3. 3- ml Syringe
4. Adapter from end of a 7-mm endotracheal tube
5. Oxygen source at 15L/min (40-50 lb per square in.) connected by tubing with a Y connector or fashioned with a side hole. A BVM may be substituted but is not optimal.

Surgical Cricothyroidotomy

1. Personal Protective Equipment
2. Scalpel with a #10 (preferable because of its greater width) or #11 blade
3. 6-mm endotracheal tube or tracheostomy tube (preferred)
4. Tape to secure the endotracheal tube in place
5. Cloth ribbon and sutures to secure tracheostomy tube in place
6. Bag-valve mask device and oxygen source

TRAINING REFERENCES: Tintinalli's Emergency Medicine

REMARKS/NOTES: Failure to correctly locate appropriate location for cricothyroidotomy immediately stops the test

OBJECTIVE:

1. Given the necessary equipment, perform a needle cricothyroidotomy
2. Given the necessary equipment, perform a surgical cricothyroidotomy.

EVALUATION INSTRUCTIONS: After the trainee has received instruction allow sufficient practice on each part of the task.

NOTE: The evaluator will **STOP** the procedure immediately and correct the member if performance is detrimental to patient safety.

STEPS IN TASK PERFORMANCE:

1. Identify indications and contraindications for cricothyroidotomy
2. Identify landmarks used to perform procedure
3. Identify vital structures which may be injured by incorrect technique
4. Prepare site
5. Perform needle cricothyroidotomy
6. Perform incision cricothyroidotomy

ATTACHMENT: Performance checklist.

FEEDBACK: Using this checklist as a source of information, discuss the trainee's performance indicating strengths, weaknesses, suggested improvements, etc. If the trainee performed all steps of the task satisfactorily, document the results in the trainee’s training record.

PERFORMANCE ITEM	SAT	UNSAT
CRICOTHYROIDOTOMY		
1. Identify indications for cricothyroidotomy		
a. Upper airway obstruction prohibiting ventilation or intubation		
b. Cervical spine injuries considered unacceptable for intubation		
2. Identify landmarks used to perform procedure		
a. Cricoid cartilage		
b. Thyroid cartilage		
c. Cricothyroid the membrane		
3. Identify vital structures which may be injured by incorrect technique		
a. Carotid arteries		
b. Esophagus		
c. Trachea		
4. Place patient supine, with the neck straight and not angulated		
5. If time permits, apply provident-iodine solution to the skin		
6. Ventilate with bag-valve mask connected to oxygen while gathering supplies		
7. Perform needle cricothyroidotomy		
a. Stand at one side of the patient at the level of the neck		
b. Locate cricothyroid membrane		
c. Attach a 3-ml syringe to the catheter (12 or 14 gauge)		
d. Introduce the catheter into the subcutaneous tissue at a 90-degree angle to the skin		
e. Aspirate gently while advancing the catheter over the needle		
f. When air suddenly returns (indicating entry into the airway), change the angle to 45 degrees and advance the catheter over the needle into the larynx		
g. Withdraw the needle and syringe		
h. Disconnect the 3-ml syringe from the bare needle		
i. Withdraw the plunger from the syringe and attaché the plungerless 3-ml syringe barrel to the catheter in the neck		
j. Attach the adapter (from the end of a 7-mm endotracheal tube) to the open end of the 3-ml syringe or place a 7-mm endotracheal tube into the empty syringe barrel and inflate the balloon		
k. Attach the oxygen source to the adapter and start ventilation with a 100% oxygen source		
l. The operator must hold the catheter securely , as it can become displaced with minimal movement		
m. Stabilization is maintained by the operator until another choice of airway is established, either tracheostomy or oro- or nasotracheal intubation (if possible)		

PERFORMANCE ITEM	SAT	UNSAT
CRICOTHYROIDOTOMY - Continued		
8. Perform surgical cricothyroidotomy		
a. Stand at one side of the patient at the level of the neck		
b. Locate the cricothyroid membrane		
c. Using the thumb and middle finger of the nondominant hand, stabilize the two cartilages		
d. Use the scalpel to make a vertical incision in the midline between the two cartilages		
e. With the scalpel blade positioned horizontally, perforate the cricothyroid membrane so that the blade goes in approximately half its length		
f. Place the backend of the scalpel handle into the incision in the cricothyroid membrane to widen the opening		
g. Place the endotracheal tube (or tracheostomy tube) in the opening		
h. Secure the tube carefully with a ribbon and/or adhesive tape		
i. Connect to bag-valve mask device for ventilation. Check for breath sounds with ventilation		
j. Apply dressing and secure the tube		
CRITICAL CRITERIA		
• Failure to identify indications for cricothyroidotomy		
• Failure to identify landmarks		
• Injury to vital structures		
FINAL RESULT:		

Volume 9 **Module 1.b**

ADVANCED AIRWAY MANAGEMENT

SUBJECT AREA: Independent Duty Medical Technician (IDMT)

TASK NAMES: Emergency Medicine Procedures; Perform Airway Management

CFETP/STS REFERENCES: 10.11.3.1.1

EQUIPMENT REQUIRED:

1. Oxygen Source and tubing
2. Ambu Bag, Bag-valve Mask, non-rebreather mask
3. Suction source and catheter
4. Syringe, 5cc
5. Laryngoscope blades and handles
6. Endotracheal tubes with stylet
7. Stethoscope

TRAINING REFERENCES: Tintinalli's Emergency Medicine

REMARKS/NOTES: Failure to demonstrate preoxygenation of the patient prior to intubation or interrupting ventilation in excess of 30 seconds are "NO GO" behaviors and the performance test must be stopped.

OBJECTIVE: Given the necessary equipment, perform an endotracheal intubation within 20 seconds of interrupting ventilation

EVALUATION INSTRUCTIONS: After the trainee has received instruction, allow sufficient practice on each part of the task.

NOTE: The evaluator will **STOP** the procedure immediately and correct the member if performance is detrimental to patient safety.

STEPS IN TASK PERFORMANCE:

1. Identify indications for endotracheal intubation
2. Preoxygenate the patient
3. Select the appropriate equipment
4. Perform intubation

ATTACHMENT: Performance checklist.

FEEDBACK: Using this checklist as a source of information, discuss the trainee's performance indicating strengths, weaknesses, suggested improvements, etc. If the trainee performed all steps of the task satisfactorily, document the results in the trainee's training record.

PERFORMANCE ITEM	SAT	UNSAT
ADVANCED AIRWAY MANAGEMENT		
1. Identify indications for endotracheal intubation		
a. Need to control or assist ventilation		
b. Need to protect compromised airway		
2. Preoxygenate patient as soon as intubation becomes a consideration. 15 L/min via non-rebreather		
3. Select the appropriate equipment		
a. Select appropriate laryngoscope handle		
b. Select laryngoscope blade, appropriate to the size of the person		
c. Select ET tube, appropriate to the size and age of the person		
4. Flex patient's lower neck while extending the atlanto-occipital joint (Sniffing position)		
5. Perform intubation		
a. Hold laryngoscope in the left hand		
b. Use right hand to: insert ETT, operate suction catheter, and to manipulate larynx externally to enhance the visualization		
c. Insert blade into the right corner of the patient's mouth		
d. Visualize arytenoids		
e. Lift epiglottis		
f. Expose larynx		
g. Advance blade incrementally		
h. Advance ETT		
i. Check ETT placement via auscultation		
j. Inflate balloon with 5cc of air		
k. Secure ETT		
*****CRITICAL CRITERIA**		
• Failure to identify need for intubation		
• Failure to preoxygenate patient		
• Interrupting ventilation for more than 30 seconds at any time		
• Failure to successfully intubate within 3 attempts		
• Using the teeth as a fulcrum for the laryngoscope blade		
• Failure to ensure proper tube placement by auscultation		
FINAL RESULT:		

Volume 9 **Module 1.c**

NEEDLE THORACENTESIS

SUBJECT AREA: Independent Duty Medical Technician (IDMT)

TASK NAMES: Emergency Medicine Procedures; Perform Airway Management

CFETP/STS REFERENCES: 10.11.3.1.2

EQUIPMENT REQUIRED:

1. Catheter over needle device, 14-gauge or larger

TRAINING REFERENCES: Tintinalli's Emergency Medicine

OBJECTIVE: Given the necessary equipment, perform a needle thoracentesis.

EVALUATION INSTRUCTIONS: After the trainee has received instruction allow sufficient practice on each part of the task.

NOTE: The evaluator will **STOP** the procedure immediately and correct the member if performance is detrimental to patient safety.

STEPS IN TASK PERFORMANCE:

1. Identify indications for needle thoracentesis
2. Select the appropriate equipment
3. Select site for needle insertion
4. Insert catheter over needle device
5. Remove air from pleural space
6. Assess effectiveness

ATTACHMENT: Performance checklist.

FEEDBACK: Using this checklist as a source of information, discuss the trainee's performance indicating strengths, weaknesses, suggested improvements, etc. If the trainee performed all steps of the task satisfactorily, document the results in the trainee's training record.

PERFORMANCE ITEM	SAT	UNSAT
NEEDLE THORACENTESIS		
1. Identify indications for needle thoracentesis		
a. Tension pneumothorax		
b. Pneumothorax is present or suspected in an unstable patient		
2. Select the appropriate equipment		
a. Catheter over needle device, 14g or larger 3.5 inches in length		
3. Select site for needle insertion (a or b, "a" is the preferred site)		
a. 2nd - 3d intercostal space, Mid-clavicular line, just above the rib		
b. 4th - 5th intercostal space, Anterior axillary line, just above the rib		
4. Insert catheter over needle device		
a. Enter at the upper edge of the lower rib (e.g.... over the top of the 3rd rib)		
b. Advance the needle until airflow is heard		
c. Remove needle leaving catheter in place		
8. Assess effectiveness		
a. Determine effectiveness of needle thoracentesis in removing air		
b. Determine patient response to treatment		
c. Verbalize appropriate follow up actions for patient relieved by procedure		
***CRITICAL CRITERIA		
• Failure to identify need for needle thoracentesis		
• Failure to recognize appropriate anatomical landmarks		
FINAL RESULTS		

Volume 9 **Module 1.d**

ADVANCED FOREIGN BODY REMOVAL

SUBJECT AREA: Independent Duty Medical Technician (IDMT)

TASK NAMES: Emergency Medicine Procedures; Perform Airway Management

CFETP/STS REFERENCES: 10.11.3.1.4

EQUIPMENT REQUIRED:

1. Laryngoscope
2. Magill forceps
3. Supplemental oxygen equipment
4. Gloves
5. Suction apparatus

TRAINING REFERENCES: Tintinalli's Emergency Medicine

REMARKS/NOTES: Failure to attempt Heimlich Maneuver/chest thrusts first stops the test

OBJECTIVE: Given the necessary equipment, perform a foreign body removal

EVALUATION INSTRUCTIONS: After the trainee has received instruction allow sufficient practice on each part of the task.

NOTE: The evaluator will **STOP** the procedure immediately and correct the member if performance is detrimental to patient safety.

STEPS IN TASK PERFORMANCE:

1. Identify indications and contraindications for foreign body removal
2. Select the appropriate equipment
3. Perform foreign body removal

ATTACHMENT: Performance checklist

FEEDBACK: Using this checklist as a source of information, discuss the trainee's performance indicating strengths, weaknesses, suggested improvements, etc. If the trainee performed all steps of the task satisfactorily, document the results in the trainee's training record.

PERFORMANCE ITEM	SAT	UNSAT
ADVANCED FOREIGN BODY REMOVAL		
1. Identify indications for foreign body removal		
a. Airway obstruction		
b. Heimlich maneuver/chest thrusts unsuccessful in clearing airway		
c. Evidence of significant hypoxia		
d. Need to clear or control airway		
2. Select the appropriate equipment		
a. Laryngoscope		
b. Magill forceps		
c. Supplemental oxygen equipment		
d. Gloves		
e. Suction apparatus		
3. Perform foreign body removal		
a. Use laryngoscope to attempt visualization of foreign body in the same manner you would attempt oropharyngeal intubation		
b. If object is visualized, use Magill forceps and remove foreign body		
c. If foreign body is smaller and deeper, object may be removed using a suction device		
d. If object cannot be visualized, continue with basic maneuvers		
e. Consider the benefits from initiating cricothyrotomy		
***CRITICAL CRITERIA		
• Failure to attempt Heimlich Maneuver/chest thrust prior to advanced removal method		
FINAL RESULT:		

AEROSPACE MEDICAL SERVICE SPECIALTY – IDMT

BIBLIOGRAPHY AND OTHER REFERENCES

1. *Food Code*, 2013, U.S. Public Health Service, Food and Drug Administration. College Park, MD.
2. AFMAN 10-246, Food and Water Protection Program, 27 May 2014.
3. AFMAN 48-138_IP, Sanitary Control and Surveillance of Field Water Supplies, 1 May 2010.
4. AFMAN 48-147, Tri-Service Food Code, 30 April 2014.
5. AFI 48-144, Drinking Water Surveillance Program, 21 October 2014.
6. AFI 48-116, Food Safety Program, 19 August 2014.
7. Tintinalli JE. Tintinalli's Emergency Medicine, A Comprehensive Study Guide. Current Edition. Chapel Hill, NC. McGraw-Hill, 2014.