Intratheater Transport of the Critically Ill or Injured Patient from Role 1, 2, and 3 MTFs

Original Release/Approval		18 Dec 2004 & 18 Sep 2007		Note: This CPG requires an annual review.
Reviewed:	May 2013	Approved:	17 Oct 20~~0~~13	
Supersedes:	Intratheater Transfer and Transport of Level II and III Critical Care Trauma Patients, Nov 08			
☐ Minor Changes ***(or)***		☒ **Changes are substantial and require a thorough reading of this CPG (or)**		
☐ Significant Changes				

1. **Goal.** To establish guidance for the intra-theater, non-regulated, ground and air transport of the ***critically ill or injured patient and ensure the appropriate level of medical care during movement.*** The focus of this guideline is to establish the role and responsibilities of the transferring provider and provide guidance on the transfer process for critically ill and higher injury severity patients.

   Implementation of these guidelines requires adequate numbers of trained and deployed Enroute Critical Care Providers (ECCPs). In an immature theater of operations or in a larger scale conflict, casualty numbers may exceed number of ECCPs. During periods with a high number of casualties, compliance with this guideline may be compromised. Guidelines warrant continual monitoring in these periods to optimally match available medical resources with high numbers of casualties.

2. **Background.**

   a. In the current combat environment, the survivability rate is greater than 98 percent at Role 3 facilities for US and NATO casualties (Joint Theater Trauma System Monthly Theater Director's Report). An important factor in the survivability of these war causalities is the enroute care they receive from one Role of care to another. Early data from the Joint Trauma System (JTS) indicates that for patients with an ISS Score of >25 there is a survival advantage when transported with a qualified critical care nurse or physician. (Analysis of Role 2 → 3 Transfer patients & Advanced care providers in Operation Enduring freedom, Joint Trauma System, 17 April 2013)

   b. The intra-theater transport system for patient movement is a unique and significant part of the Force Health Protection concept for "clearing the battlefield." Medical evacuation is the timely, efficient movement *and* enroute care of patients by medical personnel from point of injury (POI) and/or medical facilities to higher Roles of care during Unified Land Operations. The goal of ground, rotary wing or fixed wing medical evacuation is to provide every patient injured on the battlefield or in the Area of Responsibility (AOR), the optimal opportunity for survival and the maximum potential for a functional recovery.

   c. Past war experiences from World War II to current operations in Iraq and Afghanistan, as well as the civilian transport model, have shown a decrease in the morbidity and mortality of critically ill or injured patient when a Nurse/Medic or Physician/Medic team is utilized.

   d. Patient transport in the combat environment presents unique and significant challenges to patient care. Teams highly trained and specialized in transport physiology *OPTIMALLY*

operating under the medical direction of a qualified physician* are required to safely, effectively manage, and transport all critically ill or injured patients in theater. These teams are comprised of Enroute Critical Care Providers (ECCPs) who augment traditional MEDEVAC crews. ECCPs are currently considered non-rated crewmembers.

Physician fully trained and qualified in pre-hospital and enroute critical care.

3. Transfers from a Role 1, 2, 3 Facility.

Patient Transfer Criteria:

a. ***All critically ill, injured, or high risk patients shall be transferred by an Enroute Critical Care Team when requiring transport from one facility to another.*** Critically ill or injured patients are defined as patients who require advanced monitoring, have conditions with the potential for significant deterioration, or require further resuscitative and critical care services during the inter-facility transport.

Patients should meet the following criteria before transfer*:

1) Major hemorrhage controlled
2) Appropriate response to resuscitation (Base deficit < 5 mEq/l)
3) Stabilization of all long bone and pelvic fractures (stabilization may be accomplished using non-surgical means)
4) Adequate post-operative recovery

**Patients not meeting these criteria should be optimized as possible prior to transport.*

Recommended Physiologic Parameters for Transport*

Heart Rate	50> < 120 bpm
Systolic Blood Pressure (SBP)	> 90mmHg
Mean Arterial Pressure (MAP)	> 60mmHg
Hemoglobin (Hgb)	> 7g/ dl
Hematocrit (Hct)	> 21%
Platelets (PLT)	> 95/mm^3
INR	< 2.0
pH	>7.3
Base Deficit	< 5mEq/L
Temperature	> 35ºC or 95ºF
Pulse Ox (SPO2)	> 92%
PaCo2	35> < 45mmHg

* Patients not meeting the above criteria should be considered for further resuscitation. In the context of this CPG, the "transferring provider" is the provider responsible for the

care of the patient at the origin medical site. The transferring provider may consider a high risk or urgent transfer when there is a significant limitation in the ability to provide the appropriate medical care to further improve the patient's condition. A risk/benefit analysis by the transferring provider should always be performed. High risk and urgent transfers will be documented as such in the patient's medical record and the transferring provider assumes responsibility for the patient until they reach the next higher level of care. ***The final authority and responsibility for the transfer decision rests with the transferring provider.***

b. **Special Considerations:** Providers should consider "*Comfort Care*" at Role 2 facilities for Local Nationals (LNs) with catastrophic injuries who are not likely to survive transport.

c. **Responsibility of Transferring (Sending) Facility:**

Transferring Provider:

1) ***All critical care, damage control resuscitation (DCR), and damage control surgery (DCS) patients will be transported with an Enroute Critical Care Provider.*** Indications for critical care transport include but are not limited to ANY of the following:

a) Advanced airway support (mechanical ventilation)

b) Burns (especially > 20% TBSA)

c) Continued aggressive fluid or blood component administration

d) Vasoactive medication requirement

e) Invasive hemodynamic or intracranial monitoring

f) Patients who have undergone vascular reconstruction or placement of a vascular shunt and is at high risk for clot or hemorrhage

g) Unstable angina, STEMI, NSTEMI, or other high risk cardiovascular disease

The transferring provider may request an ECCP for conditions outside these parameters at their discretion.

2) Arrange all medical aspects related to the transport:

a) Establishes contact with appropriate receiving facility DCCS or accepting physician to obtain acceptance of the patient.

b) Informs the TOC that patient has been accepted by the receiving facility's DCCS for transport.

c) Determines the need for high acuity enroute care (ERC) requirements and requests a critical care provider on 9-Line.

d) Assesses patient pre-flight, to include evaluating the patient's ventilator status and hemodynamic stability.

e) Provides ERC orders appropriate for the transport environment. It is preferable that these be documented (see, APPENDIX C, Enroute Critical Care Transfer Order Set).

Directs their team to initiate Enroute Critical Care Transfer Document "ECCTD" (see APPENDIX B, Enroute Critical Care Transfer Document). Ensures all information inside the black box on the ECCTD is completed prior to transfer. Assembles documentation, reports, and imaging that will accompany the patient. Electronically sends pertinent imaging to receiving facility whenever possible.

f) At a minimum, documents essential patient care information, radiology dictation, pharmacy entries, lab test results and a discharge summary note in accordance with the JTTS CPG, Use of Electronic Clinical Documentation in the CENTCOM AOR.

3) Communicates the plan of care with the ECCP.

4) Assists in the packaging and preparation of the patient for transport.

5) If the patient is intubated, verifies adequate cuff pressure of endotracheal tube and adjusts as required.

6) Verifies the ventilator settings and ventilator care plan with the ECCP after reviewing the latest ABG and current $EtCO^2$ readings.

7) Ensure ECCP is provided with the most current lab values. If the patient is vented, ABGs should be performed preferably at a maximum of 15 minutes prior to transfer on the patient transport equipment (PTE) ventilator they will be transferred with.

Transferring Nursing Staff:

1) Prepares patient for transport prior to ECCP arrival:

a) Ensures a photocopied medical record accompanies the patient which includes the JTTS trauma flow sheet and/or Burn Flow Sheet , the admission note, progress note(s), discharge summary, operative report(s), ancillary study results (including most recent labs and x-rays), nursing note(s) and medication administration record (MAR), DA Form 4677 (Therapeutic Documentation Care Plan – Non-Medication), DA Form 4678 (Therapeutic Documentation Care Plan – Medications), record of Vital Signs and I&O flow sheets.

b) If a patient requires mechanical ventilation during transport, the patient should be placed on a PTE ventilator at least 30 minutes prior to transport to ensure patient tolerance prior to transport. ABGs should be performed 15 minutes prior to transport and the patient must be stable on the transport ventilator.

c) Patients should be place on continuous end-tidal CO_2 ($EtCO_2$) monitoring prior to and throughout transport if available.

d) Ensure that any medical equipment required for transport is plugged into an external power source until the time of transport.

2) Utilize *Atrium* dry seal chest tube system for flight. If not available, place Heimlich valve in tubing circuit between patient and drainage system and place to water seal. Ensure two padded chest tube clamps remain with the patient at all times.

3) Special Considerations:
   a) If the patient's jaws are wired, wire cutters will accompany patient. An anti-emetic medication will be given no more than 15 minutes prior to transport unless contraindicated.
   b) Suspected penetrating eye injuries will be covered with a Fox eye shield or appropriately protected. Ointments and dressings that apply pressure to the affected eye will NOT be applied. Avoid interventions that would induce nausea, gagging, or vomiting.
   c) Post operative eye injuries that have pressure dressings applied by the ophthalmologist will remain in place during transport.
4) Prepare and organize medications and fluids required during transport, including the following:
   a) Sedation
   b) Analgesia
   c) Vasoactive
   d) Paralytics
   e) Neuro protective
   f) Anti-emetics
   g) Procoagulant or anticoagulant infusions
   h) Intravenous fluids and blood products
5) Ensure enroute critical care providers are supplied with enough medication, including mixed infusions to get the patient to the receiving facility.
6) Change dressings prior to transport when indicated.
7) Confirm all IV lines are patent, functioning and labeled prior to transport. Ensure there are either two large bore IV lines or a multi-lumen central line for transport.
8) Ensure endotracheal tubes are secured prior to transport, utilizing a commercially approved device (recommended) or umbilical tape.
9) For a patient with a tracheostomy, send obturator with the patient. Send same size and smaller tracheostomy with tracheostomy ties (no tape).
10) Obtain an EKG within 24 hours and 12 hours of transport when possible and clinically indicated.
11) For burn patients with $\geq$ 20% TBSA burns, initiate the appropriate fluid resuscitation and the JTTS *Burn Resuscitation Flow Sheet* to document care. Send the Burn Flow Sheet with the patient to ensure accurate documentation of early burn resuscitation.
12) Initiate documentation on the Enroute Critical Care Transfer Document (APPENDIX B) by completing all Pre-transfer information portions within the highlighted black

box, including: patient demographics, MOI/Dx/Procedures, VS, pertinent laboratory and monitoring data, ventilator settings if appropriate, I&Os, medications and patient assessment.

d. **General Principles of Pre-Transport Preparation:**

1) Patients who may require any surgical procedures at the receiving MTF, to include dressing changes in the OR, should be kept NPO for all Intra-theater transfers.

2) Transfer patients on a standard NATO litter with collapsible handles. Pad the litter and use litter straps to snugly secure the patient (2 straps minimum).

3) Ensure the patient has at least two patent large bore (18g or larger, if possible) peripheral lines or a multi-lumen central line.

4) Ensure the patient has a stable airway. If there is a risk to the patency of the airway, consider intubation.

5) Insert NG/OG tube on all ventilated patients, and ensure anti-emetics are given prior to flight.

6) Secure all equipment (e.g., tubes, Intravenous lines, drainage devices, and patient care devices)

7) Place patient on PTE equipment 30 minutes prior to transport. In order to evaluate ventilator settings on PTE, draw ABG 15 minutes prior to transport. Adjust settings based on ventilator goals.

8) Do not extubate patients within six hours of transfer.

9) All neurologic exams should be completed prior to administration of any neurologically altering medication.

10) Ensure ordered sedation/pain/paralytic medications have been given prior to flight if needed.

11) Provide hearing and eye protection to patient.

12) Make sure patient is packaged properly to reduce the risk of hypothermia and to maintain a normothermic conditions (See CPG Hypothermia prevention: http://usaisr.amedd.army.mil/assets/cpgs/Hypothermia_Prevention_20_Sep_12.pdf).

13) Remove all air from intravenous fluid bags and place all free flowing IV bags on pressure bags.

14) When not using a SMEED, place oxygen cylinders between the patient's legs, cover the cylinder(s) with a wool blanket and then secure equipment (monitor, ventilator, etc…) on top of the padded O2 cylinder(s). Equipment should be oriented so that it remains accessible during transport. Each piece of equipment should be secured with a litter strap. A BVM should be attached to the oxygen cylinder and placed at the patient's head. Place all documentation required for transport in a folder under the patient's head. If the SMEED transport platform is used in transport, follow the manufacturer's packaging guidelines.

15) Pre-plan the use of redundant systems to monitor the patient during transport.

16) Securely affix all equipment, supplies, loose tubing and lines to NATO litter prior to moving the patient to the vehicle of aircraft.

e. **Conflict resolution.** Resolution of conflict should optimally occur as a collaborative effort between the transferring physician and ECCP. Direct involvement of the theater ERCC Director may also be considered, but should not inappropriately delay transfer. Final authority and responsibility for transfer rests with the transferring physician or physician medical director of the transferring provider.

4. Performance Improvement (PI) Monitoring.

a. Intent (Expected Outcomes)

1) Casualties will be flown with an enroute care team commensurate with the clinical condition of the casualty.

2) Casualties and equipment will be thoroughly assessed for flightworthiness to the next level of care.

b. Performance/Adherence Measures

1) Casualties requiring mechanical ventilation are flown by an enroute critical care provider (ECCP).

2) Casualties are assessed for adequacy of resuscitation. For patients with any of the following parameters HR >120 or <50, systolic BP <90, temperature core <35 C, SpO2 <92% on supplemental O2, Hct <21, base deficit more negative than -5, pH < 7.3 documentation is sufficient to indicate the need for transfer prior to restoration of physiology to more normal parameters.

3) Equipment will be check for adequate battery charges and full oxygen tanks prior to transfer. Any equipment failures enroute will be noted by the receiving facility staff and relayed to the JTTS TNCs. JTTS TNCs will report equipment failures to the JTTS PreHospital Director.

4) Hard copy of the medical record will accompany the patient.

5) All components of the 'Black Box' on (see APPENDIX B, Enroute Critical Care Transfer Document.

c. Data Source.

1) Patient Record

2) Department of Defense Trauma Registry (DoDTR)

d. System Reporting & Frequency.

The above constitutes the minimum criteria for PI monitoring of this CPG. System reporting will be performed annually; additional PI monitoring and system reporting may be performed as needed.

The system review and data analysis will be performed by the Joint Theater Trauma System (JTTS) Director, JTTS Program Manager, and the Joint Trauma System (JTS) Performance Improvement Branch.

5. References:

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10. Morrison J, Oh J, Dubose J, O'Reilly D, Russell R, Blackbourne L, et al. Enroute Care Capability from Point of Injury Impacts Mortality Following Severe Wartime Injury. *Ann Surg* 2012; 257:330-4

Approved by CENTCOM JTTS Director, JTS Director and CENTCOM SG

Opinions, interpretations, conclusions, and recommendations are those of the authors and are not necessarily endorsed by the Services or DoD.

APPENDIX A ENROUTE CRITICAL CARE PROGRAM

Enroute Care Program was established through a request for forces (RFF) in 2009 in response to gaps in standard of care for critically ill or injured patients in the intra-theater enroute care environment. There are personnel integrated within MEDEVAC units dedicated to the mission of Enroute Critical Care.

1. **Enroute Care Team.** Enroute Care Teams are comprised of a Flight Medic (Organic to MEDEVAC Unit) and one of the following:
   a. RN (US Army Critical Care Nurse (66H8A), Emergency Trauma Nurse (66HM5) or Service Equivalent)
   b. CRNA (USAF TCCET)
   c. Emergency Medicine Physician (USAF TCCET)
2. **Professional Standards of Enroute Critical Care Providers (ECCP).**
   a. The ECCP will practice autonomously within the scope of practice defined by their licensure and training while using sound clinical judgment in the transport environment.
   b. The ECCP practices in accordance with guiding JTTS CPGs, organizational standards, policies, ECC protocols and procedures set forth by the overseeing physician and director.
   c. The ECCP assumes responsibility and accountability for actions.
   d. The ECCP will continue to maintain clinical expertise and conduct continuing education with the healthcare team.
3. **Program PI and Peer Review:**
   a. Ensures all copies of transported patient's medical records are uploaded to the MEDEVAC e-mail address (JTTSMEDEVAC@afghan.swa.army.mil). JTTS will upload these documents to the electronic health record.
   b. Ensures performance improvement audits are ongoing. Forwards any clinical practice or patient safety concerns to the Medical task Force or Unit Commander or designee utilizing DD2852 (near miss report). http://www.dtic.mil/whs/directives/infomgt/forms/eforms/dd2852.pdf
   c. Forwards any equipment or supply issues to unit logistics or as directed by the unit commander. Use form DD2852 (near miss report).
4. **Peer Review.**
   a. All ECCP should have 10% of their transfer documents peer reviewed once per quarter by the Enroute Critical Care Director.
   b. Peer review should be anonymous but designed to improve patient care and outcomes.
   c. The Enroute Critical Care Director will set criteria for peer review.

5. JTTS OHC.

a. Reviews, updates and coordinates this CPG annually with theater stakeholders and routes through JTTS Director in accordance with the JTTS CPG Development, Approval, Implementation, and Monitoring Process .

b. Assists in gathering and routing of pre-hospital and transport data to the Trauma Nurse Coordinator (TNCs).

c. Reports POI and enroute critical care transfer captures rates to JTTS Program Manager to be captured in the JTTS Theater Director's Report.

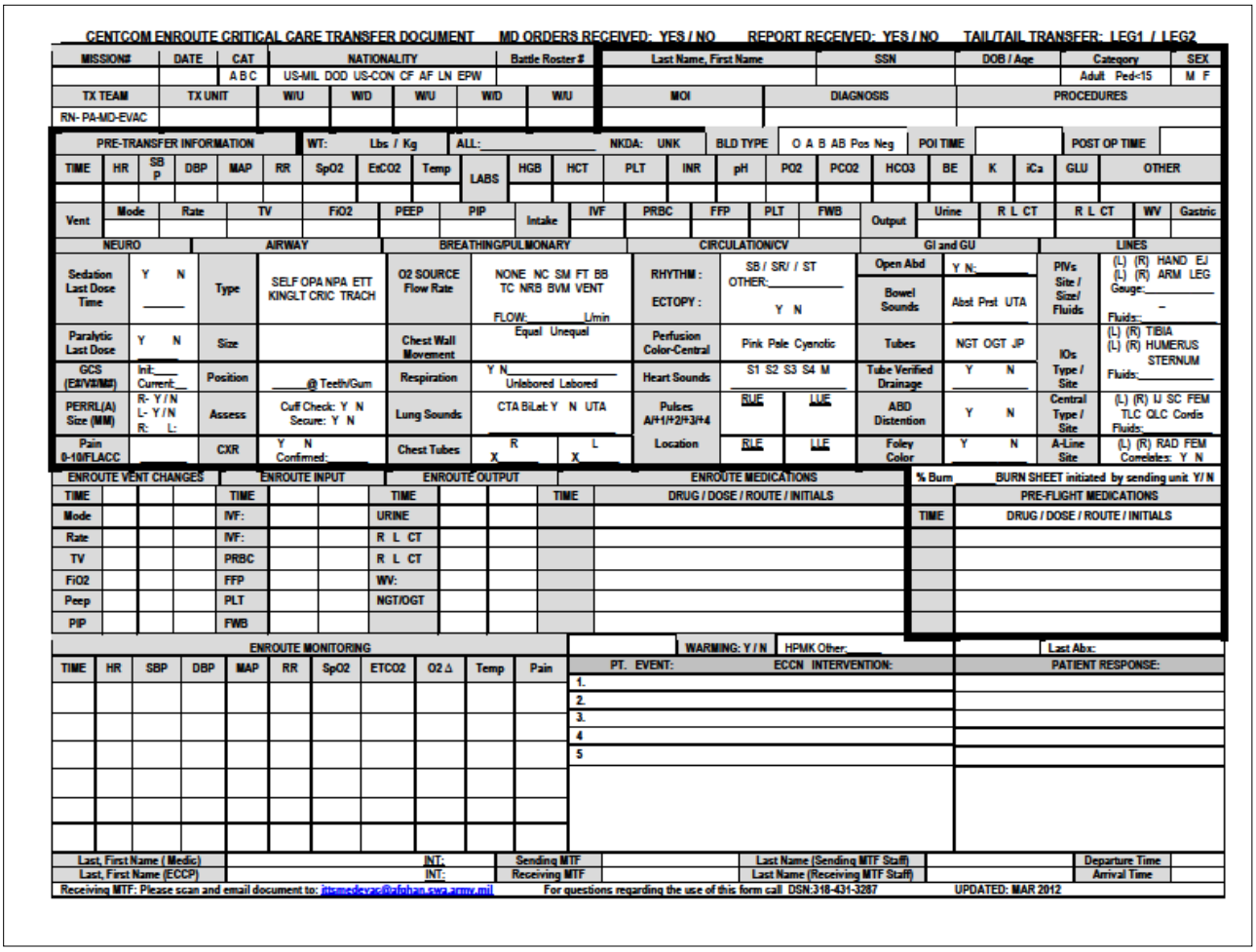
d. Provides PI feedback to the Enroute Critical Care Director, MEDEVAC Companies, TF MED Patient Safety Officer, Regional Command Surgeons, CENTCOM and JTS as necessary.

e. Logs MEDEVAC Mission numbers and captures data on the trauma logs.

f. Enters transport data into the Theater TACEVAC Database (TTDB) and Department of Defense Trauma Registry (DoDTR).

g. Identifies and logs PI items into the DoDTR and provides feedback to the JTTS OHC office in order to facilitate loop closure.

APPENDIX B ENROUTE CRITICAL CARE TRANSFER DOCUMENT



CENTCOM ENROUTE CRITICAL CARE TRANSFER DOCUMENT MD ORDERS RECEIVED: YES / NO REPORT RECEIVED: YES / NO TAIL/TAIL TRANSFER: LEG1 / LEG2

MISSION#	DATE	CAT	NATIONALITY	Battle Roster #	Last Name, First Name	SSN	DOB / Age	Category	SEX
		A B C	US-MIL DOD US-CON CF AF LN EPW					Adult Ped<15	M F

TX TEAM	TX UNIT	W/U	W/D	W/U	W/D	W/U	MOI	DIAGNOSIS	PROCEDURES
RN- PA-MD-EVAC									

PRE-TRANSFER INFORMATION	WT: Lbs / Kg	ALL:_____	NKDA: UNK	BLD TYPE	O A B AB Pos Neg	POI TIME		POST OP TIME	

TIME	HR	SBP	DBP	MAP	RR	SpO2	EtCO2	Temp	LABS	HGB	HCT	PLT	INR	pH	PO2	PCO2	HCO3	BE	K	iCa	GLU	OTHER

Vent	Mode	Rate	TV	FiO2	PEEP	PIP	Intake	IVF	PRBC	FFP	PLT	FWB	Output	Urine	R L CT	R L CT	WV	Gastric

NEURO		AIRWAY		BREATHING/PULMONARY		CIRCULATION/CV		GI and GU		LINES	
Sedation Last Dose Time	Y N _____	Type	SELF OPA NPA ETT KINGLT CRIC TRACH	O2 SOURCE Flow Rate	NONE NC SM FT BB TC NRB BVM VENT FLOW:_____ L/min	RHYTHM : ECTOPY :	SB / SR / / ST OTHER:_____ Y N	Open Abd / Bowel Sounds	Y N:_____ Abst Prst UTA	PIVs Site / Size/ Fluids	(L) (R) HAND EJ (L) (R) ARM LEG Gauge:_____ Fluids:_____
Paralytic Last Dose	Y N	Size		Chest Wall Movement	Equal Unequal	Perfusion Color-Central	Pink Pale Cyanotic	Tubes	NGT OGT JP	IOs Type / Site	(L) (R) TIBIA (L) (R) HUMERUS STERNUM Fluids:_____
GCS (E#V#M#)	Init:___ Current:__	Position	_____@ Teeth/Gum	Respiration	Y N_____ Unlabored Labored	Heart Sounds	S1 S2 S3 S4 M	Tube Verified Drainage	Y N		
PERRL(A) Size (MM)	R- Y / N L- Y / N R: L:	Assess	Cuff Check: Y N Secure: Y N	Lung Sounds	CTA BiLat: Y N UTA	Pulses A/+1/+2/+3/+4	RUE LUE	ABD Distention	Y N	Central Type / Site	(L) (R) IJ SC FEM TLC QLC Cordis Fluids:_____
Pain 0-10/FLACC		CXR	Y N Confirmed:_____	Chest Tubes	R X_____ L X_____	Location	RLE LLE	Foley Color	Y N	A-Line Site	(L) (R) RAD FEM Correlates: Y N

ENROUTE VENT CHANGES				ENROUTE INPUT			ENROUTE OUTPUT			ENROUTE MEDICATIONS	% Burn	BURN SHEET initiated by sending unit Y / N
TIME				TIME			TIME			TIME	DRUG / DOSE / ROUTE / INITIALS	PRE-FLIGHT MEDICATIONS
Mode				IVF:			URINE					TIME DRUG / DOSE / ROUTE / INITIALS
Rate				IVF:			R L CT					
TV				PRBC			R L CT					
FiO2				FFP			WV:					
Peep				PLT			NGT/OGT					
PIP				FWB								

ENROUTE MONITORING											WARMING: Y / N	HPMK Other:_____	Last Abx:
TIME	HR	SBP	DBP	MAP	RR	SpO2	ETCO2	O2 Δ	Temp	Pain	PT. EVENT: ECCN INTERVENTION:		PATIENT RESPONSE:
											1.		
											2.		
											3.		
											4		
											5		

Last, First Name (Medic)		INT:	Sending MTF		Last Name (Sending MTF Staff)		Departure Time	
Last, First Name (ECCP)		INT:	Receiving MTF		Last Name (Receiving MTF Staff)		Arrival Time	

Receiving MTF: Please scan and email document to: jttsmedevac@afghan.swa.army.mil For questions regarding the use of this form call DSN:318-431-3287 UPDATED: MAR 2012

APPENDIX C ENROUTE CRITICAL CARE TRANSFER ORDER SET

Standard Medication Order Set

Patients Name: _____ DOB: _____ SS#_____

Date: _____ Sending MTF: _____Sending Provider: _____

Allergies: _____ Weight: _____KG

Respiratory:

- ☐ O2 to maintain O2 sat >92%
- ☐ Ventilator settings:
  Mode_____ Rate_____FiO2_____TV_____Peep_____

Analgesics:

- ☐ Morphine 1-10mg IV every 20 min PRN
- ☐ Fentanyl 25-100mcg IV every 10 min PRN
- ☐ Ketamine 50-150mg IV every 20 min PRN (hold if SBP ≥ 170mmhg). Max dose 250 mg

Antiemetic:

- ☐ Phenergan 12.5-25 mg IVP every 4-6 hrs (for active vomiting).
- ☐ Zofran 4mg IVP, may repeat dose after 15 min (max dose 8 mg).

Sedation:

- ☐ Midazolam 1-5 mg IV every 15 min PRN. Riker Scale 1-2
- ☐ Propofol drip at _____mcg/kg/min; Titrate up to 80mcg/kg/min for Riker Scale 1-2. Monitor BP Q 5mins, hold if MAP <60.

Hypotension:

- ☐ IV Fluids NS/LR 250 ml bolus, repeat up to 1000mLs PRN

For persistent hypotension SBP ≤ 90 or MAP ≤ 60mmhg

- ☐ Phenylephrine 50-100mcg bolus every 10mins, hold if HR < 50
- ☐ Vasopressin 0.2 -0.4 units bolus every 15 min PRN
- ☐ Vasopressin drip @ 0.02-0.04units/min **(DO NOT TITRATE)**

Paralytics: ☐ Vecuronium 1-10mg IVP PRN ☐ Rocuronium 5-50mg IVP PRN

Intracranial Hypertension: ☐ 3% Saline 250 ml bolus ☐ _____@ ml/hr

Additional Instructions:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

Physician Signature: _____

APPENDIX D PATIENT TRANSPORT PREPARATION CHECKLIST

Initials	Evaluation Steps
	1. Sending location: _____Accepting location_____ Flight nurse called: name/ time : _____
	2. Anesthesia called: intubation if indicated. ETT secured.
	3. Patient meets criteria for enroute critical care transport: risk documented by sending physician.
	Preparation Steps
	Positioning and Proper Monitoring, Initiating 9-Line
	1. Patient moved to litter (collapsible handles), positioned, padded, strapped, equipment (with necessary attachments) added and secured.
	2. For head-injured patients, a pre-sedation neurologic examination will be performed. GCS and neuro exam documented on the enroute care form, suggest placing patient sitting at 45 degrees. (For eye injured pts, fox shield in place. For burn patients, JTTS burn sheet initiated)
	3. Ventilator set as directed by sending physician (place on PTE vent at least 30 min prior to flight).
	4. Ventilator tubing checked to be free from obstruction, with ETCO2 and secondary lines attached.
	5. Orogastric or nasogastric tube is inserted (unless contraindicated), placement verified with chest x-ray, and attached to low-intermittent suction.
	6. IV access verified, patent and secured.
	7. Arterial line inserted and secured. Transducer accessible.
	8. Chest tubes to water seal. (Place Heimlich valve for Non-Atrium chest drainage systems)
	Equipment, Medication, Chart, and Personnel Preparation
	1. Medications needed for flight prepared, labeled, and organized.
	2. Complete chart photocopied (including x-ray cd), patient belongings bagged and tagged. Enroute Critical Care Transfer Document initiated. Electronic documentation in AHLTA-T transmitted.
	3. All transport equipment placed on SMEED. If SMEED is not available, ensure equipment is accessible on the litter and secured properly.
	4. Ear plugs and eye protection for patient.

APPENDIX D PATIENT TRANSPORT PREPARATION CHECKLIST

Initials	Preparation Steps (continued)
	5. Ventilator management:
	6. Blood gas (preferably ABG) obtained, 15 min after initial settings and ventilator changes. All efforts will be made to have a documented blood gas within 30 minutes prior to flight time.
	7. Adjust ventilator settings and check O_2 tank for length of flight. Resuscitator bag under patient's head with tubing connected to O_2 source, vent tubing free from obstruction.
	Final Verification
	1. Physician, enroute critical care provider, and flight medic verbally agree on the plan of action
	2. ECC order sheet reviewed and signed by sending physician. Additional orders clearly stated.
	3. Enroute care transfer form available with preflight data completed.
	4. Immediate pre-departure assessment by ECCP and physician.

APPENDIX E
ADDITIONAL INFORMATION REGARDING OFF-LABEL USES IN CPGs

1. **Purpose**. The purpose of this Appendix is to ensure an understanding of DoD policy and practice regarding inclusion in CPGs of "off-label" uses of U.S. Food and Drug Administration (FDA)–approved products. This applies to off-label uses with patients who are armed forces members.

2. **Background**. Unapproved (i.e., "off-label") uses of FDA-approved products are extremely common in American medicine and are usually not subject to any special regulations. However, under Federal law, in some circumstances, unapproved uses of approved drugs are subject to FDA regulations governing "investigational new drugs." These circumstances include such uses as part of clinical trials, and in the military context, command required, unapproved uses. Some command requested unapproved uses may also be subject to special regulations.

3. **Additional Information Regarding Off-Label Uses in CPGs**. The inclusion in CPGs of off-label uses is not a clinical trial, nor is it a command request or requirement. Further, it does not imply that the Military Health System requires that use by DoD health care practitioners or considers it to be the "standard of care." Rather, the inclusion in CPGs of off-label uses is to inform the clinical judgment of the responsible health care practitioner by providing information regarding potential risks and benefits of treatment alternatives. The decision is for the clinical judgment of the responsible health care practitioner within the practitioner-patient relationship.

4. **Additional Procedures**.

   a. Balanced Discussion. Consistent with this purpose, CPG discussions of off-label uses specifically state that they are uses not approved by the FDA. Further, such discussions are balanced in the presentation of appropriate clinical study data, including any such data that suggest caution in the use of the product and specifically including any FDA-issued warnings.

   b. Quality Assurance Monitoring. With respect to such off-label uses, DoD procedure is to maintain a regular system of quality assurance monitoring of outcomes and known potential adverse events. For this reason, the importance of accurate clinical records is underscored.

   c. Information to Patients. Good clinical practice includes the provision of appropriate information to patients. Each CPG discussing an unusual off-label use will address the issue of information to patients. When practicable, consideration will be given to including in an appendix an appropriate information sheet for distribution to patients, whether before or after use of the product. Information to patients should address in plain language: a) that the use is not approved by the FDA; b) the reasons why a DoD health care practitioner would decide to use the product for this purpose; and c) the potential risks associated with such use.