JOINT TRAUMA SYSTEM CLINICAL PRACTICE GUIDELINE (JTS CPG)

Battle versus Non-Battle Injury Documentation Resuscitation Record (CPG ID: 11)

This CPG stresses the need for complete and accurate trauma documentation of an event, including evacuation on all trauma patients from Role 2 and Role 3 within the Central Command Area of Responsibility (CENTCOM AOR).

Contributors: CAPT Zsolt T. Stockinger, MC, USN; Mary Ann Spott, PhD; Col Stacy Shackelford, USAF, MC

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BACKGROUND

The role of trauma documentation within the Joint Trauma System (JTS) for trauma performance improvement has continuously increased since the Joint Theater Trauma Registry (JTTR), now known as the DoD Trauma Registry (DoDTR), was initiated in 2004. This progression is not unlike the first civilian trauma registries and standardized trauma flow sheets that were developed in the late 1980s. DoDTR data acquisition and processing has improved greatly, due in part to the advances which include a standardized Resuscitation Record, new TCCC cards, prehospital and en route care AARs, and the dedicated efforts by personnel both deployed and at JTS to capture these documents and ensure their inclusion within medical records.. Data collection that allows theater-wide comparison is important for the continuous learning process and to improve outcomes, standard of care development, analysis of differences in the mechanisms of injury, rescue systems, and approved treatment guidelines.

Trauma Resuscitation Record documentation can incorporate information from numerous sources (nursing flow sheets, monitors, Medical Evacuation (MEDEVAC) run-sheets, I-stat print outs, etc.). However, providers fail to document the history, physical examination, or decision making, then the event did not occur for performance improvement or research purposes, procedures or therapies (such as blood transfusion or large volume resuscitation) may be unrecognized by follow-on providers, and suboptimal care may ensue. Therefore, thorough completion of the Trauma Resuscitation Record and other medical records is critical for proper care of the individual patient and the system-wide delivery of trauma/critical care to all injured patients within the CENTCOM AOR. It is easy to forget or only capture limited data on the Resuscitation Record when trauma patients spend very little time in the Emergency Department prior to heading to the Operating Room, or at one facility before transfer to the next. It is imperative to document the thought process and to take the time to complete the Resuscitation Record when time permits, even if completed the next day.

While professionals possess a general knowledge of trauma documentation requirements, adherence to those requirements is often lacking. The need for detailing areas of performance improvement is important. The below documentation elements repeatedly surface, thus, requiring careful attention by all.

1. Complete set of initial vital signs, including temperature and respiration rate
2. GCS total score and individual Motor, Verbal and Eye opening scores
3. Total IV volume (blood, colloid and crystalloid) infused in the ED, even if fluid administration continues after transport
4. Disposition: Place and time
5. Arrival time
6. Mechanism of Injury
7. Labs transferred to trauma flow sheet (especially HCT, INR, and BE)
8. Lethal Triad Indicators (Hypothermia, Acidosis, Coagulopathy)

INDICATIONS FOR INITIATION AND COMPLETION OF RESUSCITATION RECORD

A Resuscitation Record should be initiated on ALL patients (battle/non-battle injury coalition forces, local nationals, contractors, etc.) triaged as Immediate. In addition, the Resuscitation Record should be completed on all patients seen within the first 72 hours following injury, including but not limited to the following injury causes:

- Building Collapse
- Bullet/GSW/Firearm
- Burn
- EFP
- Fall
- Fire/Flame
- IED
- Inhalation Injury
- Mine
- Mortar/Rocket/Artillery Shell
- Multi-Frag
- MVC
- Sports
- UXO
- Other
- All trauma admissions to any/all Role 3 facilities in the continuum

It is the intent of this guideline that the broadest definition of trauma be used. This should include the majority of patients with single or multi-system injury seen in the emergency department or admitted directly to the ICU and is to be used as the primary method of initial documentation.

An electronic copy of the Resuscitation Record is available on the JTS website along with other pertinent forms such as the TACEVAC AAR & PCR (4700), CENTCOM Vampire Forms, Whole Blood Transfusion Forms and the Tactical Combat Casualty Care Card. Copies are also contained in the appendices to this CPG.

1. Forms and After Action Report Submission. Digital copy available at: http://jts.amedd.army.mil/index.cfm/documents/forms_after_action

2. Resuscitation Record DD3019 (attached). Digital copy available at: http://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd3019.pdf

3. Resuscitation Record Instructions. Digital copy available: http://jts.amedd.army.mil/assets/docs/forms/DDForm3019instructions.pdf

4. TCCC card DD1380 (attached). Digital copy available at: http://jts.amedd.army.mil/assets/docs/forms/DD_Form_1380_TCCC_Card_Jun_2014.pdf

5. TACEVAC PCR DA4700 (attached). Also available at: http://jts.amedd.army.mil/assets/docs/forms/DA4700_OP5_JTS_TACEVAC-AAR&PCR.pdf

6. Lund Browder Burn Estimate and Diagram (attached)

7. JTS Burn Resuscitation Work Sheet (attached)

8. JTS Burn Resuscitation Flow Sheet (attached)

9. Cervical Spine Clearance Status Notes (attached). Also available at:

   http://jts.amedd.army.mil/assets/docs/forms/Cervical_Spine_Clearance_Status_Notes_Form.pdf

10. ASIA spine injury worksheet (attached). Also available at:

http://jts.amedd.army.mil/assets/docs/forms/ASIA_International_Stds_Diagram_Worksheet.pdf

Print copies of the above forms can be viewed in the appendices

PERFORMANCE IMPROVEMENT (PI) MONITORING

INTENT (EXPECTED OUTCOMES)

1. All patients in a US led Role 2 or Role 3 facility have a DD 1380 TCCC card and Trauma Resuscitation form (DD319)
2. Record complete and in the patient's record.
3. Trauma Resuscitation Record Part I Nursing Flow Sheet has complete and accurate documentation from the primary survey in sections 3.1, 3.2, and 3.3.
4. Trauma Resuscitation Record has complete and accurate documentation in the patient identification section, i.e. patient name, patient ID/SSN, facility, nurse and provider.
5. Trauma Resuscitation Record Part II Physician H & P has complete and accurate documentation in sections 1.3, 1.5 and 6.3.

PERFORMANCE/ADHERENCE MEASURES.

1. All trauma patients triaged as immediate or with injuries sustained from one of the causes listed in section 3 had the trauma Resuscitation Record completed.
2. The trauma Resuscitation Record was completed by the provider and the nurse on every patient expected to be admitted to a Role 3 or actually admitted to a Role 3 facility.

DATA SOURCE

- Patient Record
- Department of Defense Trauma Registry (DoDTR)

SYSTEM REPORTING & FREQUENCY

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

The system review and data analysis will be performed by the Joint Trauma System (JTS) Director and the JTS Performance Improvement Division.

RESPONSIBILITIES

- It is the trauma team leader's responsibility to ensure the Resuscitation Record Part II, Physician H&P is complete at Role 2 and Role 3.
- It is the responsibility of the nurse assigned to the trauma bay/patient to ensure the Resuscitation Record Part I, Nursing Flow Sheet is completed at Role 3.

- A member of the trauma team who is receiving report (Critical Care Air Transport, MEDEVAC, ground ambulance) should request a copy of the transport run-sheet and ensure it is included in the patient's record. All times on the Resuscitation Record should be local 24-hour military format (hhmm).

APPENDIX A: RESUSCITATION RECORD DD 3019 – PART 1 NURSING FLOW SHEET

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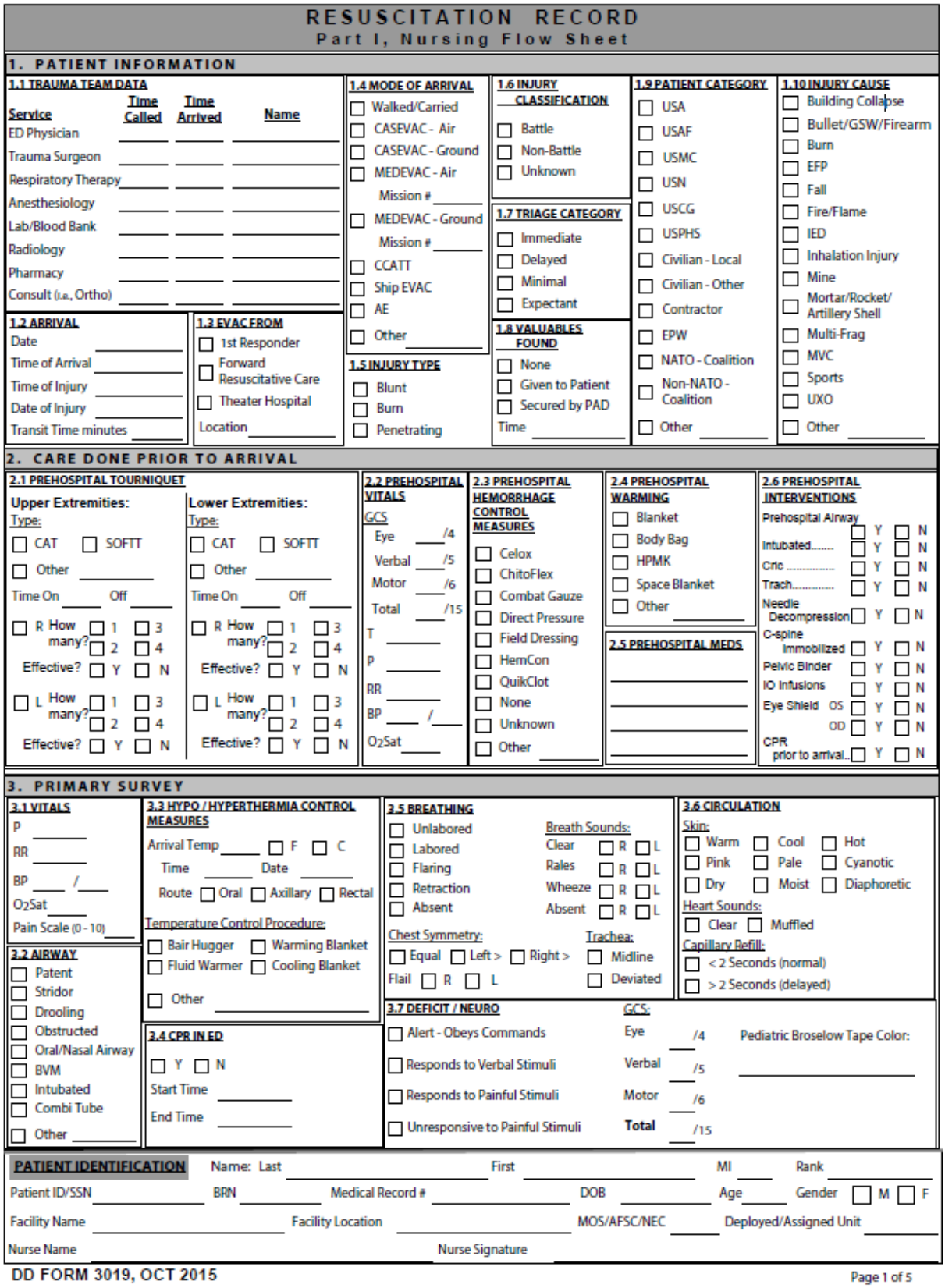

RESUSCITATION RECORD
Part I, Nursing Flow Sheet

1. PATIENT INFORMATION

1.1 TRAUMA TEAM DATA

Service	Time Called	Time Arrived	Name
ED Physician			
Trauma Surgeon			
Respiratory Therapy			
Anesthesiology			
Lab/Blood Bank			
Radiology			
Pharmacy			
Consult (i.e., Ortho)			

1.2 ARRIVAL
Date
Time of Arrival
Time of Injury
Date of Injury
Transit Time minutes

1.3 EVAC FROM
☐ 1st Responder
☐ Forward Resuscitative Care
☐ Theater Hospital
Location

1.4 MODE OF ARRIVAL
☐ Walked/Carried
☐ CASEVAC - Air
☐ CASEVAC - Ground
☐ MEDEVAC - Air
Mission #
☐ MEDEVAC - Ground
Mission #
☐ CCATT
☐ Ship EVAC
☐ AE
☐ Other

1.5 INJURY TYPE
☐ Blunt
☐ Burn
☐ Penetrating

1.6 INJURY CLASSIFICATION
☐ Battle
☐ Non-Battle
☐ Unknown

1.7 TRIAGE CATEGORY
☐ Immediate
☐ Delayed
☐ Minimal
☐ Expectant

1.8 VALUABLES FOUND
☐ None
☐ Given to Patient
☐ Secured by PAD
Time

1.9 PATIENT CATEGORY
☐ USA
☐ USAF
☐ USMC
☐ USN
☐ USCG
☐ USPHS
☐ Civilian - Local
☐ Civilian - Other
☐ Contractor
☐ EPW
☐ NATO - Coalition
☐ Non-NATO - Coalition
☐ Other

1.10 INJURY CAUSE
☐ Building Collapse
☐ Bullet/GSW/Firearm
☐ Burn
☐ EFP
☐ Fall
☐ Fire/Flame
☐ IED
☐ Inhalation Injury
☐ Mine
☐ Mortar/Rocket/ Artillery Shell
☐ Multi-Frag
☐ MVC
☐ Sports
☐ UXO
☐ Other

2. CARE DONE PRIOR TO ARRIVAL

2.1 PREHOSPITAL TOURNIQUET

Upper Extremities:
Type:
☐ CAT ☐ SOFTT
☐ Other
Time On Off
☐ R How many? ☐ 1 ☐ 2 ☐ 3 ☐ 4
Effective? ☐ Y ☐ N
☐ L How many? ☐ 1 ☐ 2 ☐ 3 ☐ 4
Effective? ☐ Y ☐ N

Lower Extremities:
Type:
☐ CAT ☐ SOFTT
☐ Other
Time On Off
☐ R How many? ☐ 1 ☐ 2 ☐ 3 ☐ 4
Effective? ☐ Y ☐ N
☐ L How many? ☐ 1 ☐ 2 ☐ 3 ☐ 4
Effective? ☐ Y ☐ N

2.2 PREHOSPITAL VITALS
GCS
Eye /4
Verbal /5
Motor /6
Total /15
T
P
RR
BP /
O_2Sat

2.3 PREHOSPITAL HEMORRHAGE CONTROL MEASURES
☐ Celox
☐ ChitoFlex
☐ Combat Gauze
☐ Direct Pressure
☐ Field Dressing
☐ HemCon
☐ QuikClot
☐ None
☐ Unknown
☐ Other

2.4 PREHOSPITAL WARMING
☐ Blanket
☐ Body Bag
☐ HPMK
☐ Space Blanket
☐ Other

2.5 PREHOSPITAL MEDS

2.6 PREHOSPITAL INTERVENTIONS
Prehospital Airway ☐ Y ☐ N
Intubated ☐ Y ☐ N
Cric ☐ Y ☐ N
Trach ☐ Y ☐ N
Needle Decompression ☐ Y ☐ N
C-spine Immobilized ☐ Y ☐ N
Pelvic Binder ☐ Y ☐ N
IO Infusions ☐ Y ☐ N
Eye Shield OS ☐ Y ☐ N
OD ☐ Y ☐ N
CPR prior to arrival ☐ Y ☐ N

3. PRIMARY SURVEY

3.1 VITALS
P
RR
BP /
O_2Sat
Pain Scale (0 - 10)

3.2 AIRWAY
☐ Patent
☐ Stridor
☐ Drooling
☐ Obstructed
☐ Oral/Nasal Airway
☐ BVM
☐ Intubated
☐ Combi Tube
☐ Other

3.3 HYPO / HYPERTHERMIA CONTROL MEASURES
Arrival Temp ☐ F ☐ C
Time Date
Route ☐ Oral ☐ Axillary ☐ Rectal
Temperature Control Procedure:
☐ Bair Hugger ☐ Warming Blanket
☐ Fluid Warmer ☐ Cooling Blanket
☐ Other

3.4 CPR IN ED
☐ Y ☐ N
Start Time
End Time

3.5 BREATHING
☐ Unlabored
☐ Labored
☐ Flaring
☐ Retraction
☐ Absent
Breath Sounds:
Clear ☐ R ☐ L
Rales ☐ R ☐ L
Wheeze ☐ R ☐ L
Absent ☐ R ☐ L
Chest Symmetry:
☐ Equal ☐ Left > ☐ Right >
Flail ☐ R ☐ L
Trachea:
☐ Midline ☐ Deviated

3.6 CIRCULATION
Skin:
☐ Warm ☐ Cool ☐ Hot
☐ Pink ☐ Pale ☐ Cyanotic
☐ Dry ☐ Moist ☐ Diaphoretic
Heart Sounds:
☐ Clear ☐ Muffled
Capillary Refill:
☐ < 2 Seconds (normal)
☐ > 2 Seconds (delayed)

3.7 DEFICIT / NEURO
☐ Alert - Obeys Commands
☐ Responds to Verbal Stimuli
☐ Responds to Painful Stimuli
☐ Unresponsive to Painful Stimuli
GCS:
Eye /4
Verbal /5
Motor /6
Total /15
Pediatric Broselow Tape Color:

PATIENT IDENTIFICATION
Name: Last First MI Rank
Patient ID/SSN BRN Medical Record # DOB Age Gender ☐ M ☐ F
Facility Name Facility Location MOS/AFSC/NEC Deployed/Assigned Unit
Nurse Name Nurse Signature

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RESUSCITATION RECORD
Part I, Nursing Flow Sheet

4. SECONDARY SURVEY

4.1 HEAD / NECK ENT

Drainage:
- ☐ Nasal (Color) _____
- ☐ Ear (Color) _____

Dental Injury ☐ Y ☐ N

CSF (Halo Test)
☐ + / ☐ -

C-spine Tender ☐ Y ☐ N

JVD ☐ Y ☐ N

Reactive Pupils

Right:	Left:
☐ Y ☐ N	☐ Y ☐ N
☐ Brisk	☐ Brisk
☐ Sluggish	☐ Sluggish
☐ NR	☐ NR

4.2 HEART / THORACIC

Rhythm
- ☐ NSR
- ☐ Tachy/Brady
- ☐ V-fib / V-tach
- ☐ PEA
- ☐ Asystole
- ☐ Other _____

Pulses
S = Strong **W** = Weak
D = Doppler **A** = Absent

	R	L
Carotid	____	____
Femoral	____	____
Brachial	____	____
Radial	____	____
Pedal	____	____

4.3 ABDOMINAL/GU
- ☐ Open Wound
- ☐ Flat
- ☐ Obese
- ☐ Distended
- ☐ Tender
- ☐ Non-Tender
- ☐ Rebound Tenderness
- ☐ Guarding
- ☐ Rigid
- ☐ Unable to Assess

Pelvic Binder ☐ Y ☐ N

Blood at Meatus/Vagina ☐ Y ☐ N

FAST
- ☐ + describe _____
- ☐ -
- ☐ Equivocal

Last Meal @ _____

4.4 EXTREMITIES

Deformities	Pulses Present	Motor	Sensory
☐ RUE	_____	☐ Y ☐ N	☐ Y ☐ N
☐ LUE	_____	☐ Y ☐ N	☐ Y ☐ N
☐ RLE	_____	☐ Y ☐ N	☐ Y ☐ N
☐ LLE	_____	☐ Y ☐ N	☐ Y ☐ N

Pulses Present: indicate **S**=Strong **W**=Weak **D**=Doppler **A**=Absent

4.5 ALLERGIES

☐ Unknown ☐ NKDA Other _____

4.6 CURRENT MEDICATIONS

☐ Unknown ☐ Last Tetanus Date _____
☐ None
☐ Current Meds: (List med, dose, & route)

_____
_____
_____
_____

4.7 PROCEDURES

Procedure	Time	Size/Type	Site	Performed By	Results
O_2 Therapy ____ Lpm	On _____ Off _____	☐ Nasal Cannula ☐ Oral Airway ☐ NRB Mask ☐ Nasal Airway ____% ☐ BVM		_____	
ET Intubation (Put additional changes in Remarks)	Time _____	Teeth _____ cm	☐ Oral ☐ Nasal	_____	☐ $ETCO_2$ Change ☐ BBS Post Intubation
C-Collar Placed Time _____	C-Collar Removed Time _____				
Chest Tube #1	Time _____	_____	☐ L ☐ R	_____	☐ Air Blood (cc) _____
Chest Tube #2	Time _____	_____	☐ L ☐ R	_____	☐ Air Blood (cc) _____
Needle Decompression	Time _____	_____	☐ L ☐ R	_____	☐ Air Blood (cc) _____
Thoracotomy	Time _____		☐ L ☐ R ☐ Clamshell	_____	
Tourniquet	Time _____	Types _____	Sites _____	_____	
Eye Shield	Time _____		☐ OS ☐ OD ☐ Both	_____	
A-line	Time _____	_____	☐ L ☐ R	_____	
Gastric Tube	Time _____	_____	☐ Oral ☐ Nasal	_____	Verified ☐ Y ☐ N Suction ☐ Y ☐ N
Urinary	Time _____	Amount _____ Color _____ Foley Size _____	☐ Meatus ☐ Suprapubic	_____	Heme Dip ☐ - / ☐ + Results _____ cc
Other Procedure	Time _____	Describe _____			
Other Procedure	Time _____	Describe _____			

Hemorrhage Control Measures
☐ Celox ☐ Combat Gauze ☐ Field Dressing ☐ QuikClot ☐ Unknown
☐ ChitoFlex ☐ Direct Pressure ☐ HemCon ☐ None ☐ Other _____

PATIENT IDENTIFICATION Name: Last _____ First _____ MI ____ Patient ID/SSN _____

BRN _____ Facility Location _____ Nurse Name _____ Nurse Signature _____

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RESUSCITATION RECORD
Part I, Nursing Flow Sheet

4. SECONDARY SURVEY, continued

4.8 INTUBATION MECH/VENT

Time _____
MODE: _____
FiO2: _____
RATE: _____
PEEP: _____
TV: _____

4.9 ABGs / VBGs

	Time	FiO2	pH	pCO2	pO2	BE	HCO3	SAT
☐ ABG or ☐ VBG								
☐ ABG or ☐ VBG								
☐ ABG or ☐ VBG								
☐ ABG or ☐ VBG								
☐ ABG or ☐ VBG								

4.10 INTRAVENOUS ACCESS AND FLUIDS

Time	Rate	Gauge	Site	IVF Type	Amount Up	Amount In	Stop

Total Amount Infused: _____

4.11 BLOOD PRODUCTS

Unit #	Type	Start	Stop	Volume	Initials

4.12 MEDICATIONS

Drug	Dose	Route	Time	Initials

4.13 VITAL SIGNS

Time	GCS	BP	P	RR	Temp	SaO2	Pain Scale (0-10)	Other (ICP)

4.14 LABS

Time Test
_____ CBC
_____ ABG
_____ VBG
_____ Chemistry
_____ PT/PTT
_____ TEG
_____ H&H
_____ INR
_____ T&S
_____ T&C x ____
_____ UA
_____ HCG
_____ Other
Specify Other: _____

4.15 CT

Type	Time
☐ Head	
☐ C-Spine	
☐ Chest	
☐ Abd	
☐ Pelvis	
☐ Pan Scan*	

* Select Pan Scan only if all of the above requested

4.16 X-RAY

Type	Time
☐ C-Spine	
☐ Chest	
☐ Abd	
☐ Pelvis	
☐ Ext	
☐ RUE ☐ LUE	
☐ RLE ☐ LLE	

4.17 DISPOSITION Date: _____ Time: _____

Admit
☐ OR ☐ ICU ☐ ICW

RTD
☐ Full ☐ Quarters ☐ Profile
☐ RTD Unit: _____

RTD Mode of Transport:
☐ Ambulatory ☐ W/C

Evac to ☐ Host Nation ☐ Coalition ☐ CASF
Facility Name: _____

Evac Priority ☐ Routine ☐ Priority ☐ Urgent

Evac Transport Vehicle
MEDEVAC: ☐ Rotary Wing - ☐ MedTech ☐ Critical Care
☐ Fixed Wing - ☐ AE ☐ CCATT
Ground: ☐ Medical ☐ Non-Medical

Evac Mode of Transport ☐ Ambulatory ☐ W/C
☐ Litter ☐ Vacuum Spine Board

4.18 DEATH INFORMATION

Time of Death _____ Mortuary Affairs Notified? ☐ Y ☐ N Time to Morgue _____

Death Remarks _____

4.19 REMARKS

PATIENT IDENTIFICATION Name: Last _____ First _____ MI ____ Patient ID/SSN _____

BRN _____ Facility Location _____ Nurse Name _____ Nurse Signature _____

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RESUSCITATION RECORD
Part II, Physician H&P

1. HISTORY & PHYSICAL - INJURY DESCRIPTION

1.1 ARRIVAL
Date _____
Time of Arrival _____

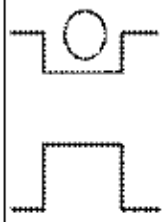
1.2 TRIAGE CATEGORY
☐ Immediate
☐ Delayed
☐ Minimal
☐ Expectant

1.3 CHIEF COMPLAINT, HISTORY AND PRESENTING ILLNESS

1.4 INJURY DESCRIPTION

(AB)rasion
(AMP)utation
(AV)ulsion
(BL)eeding
(B)urn %TBSA____
(C)repitus
(D)eformity
(DG)Degloving
(E)cchymosis
(FX)Fracture
(F)oreign Body
(GSW)Gun Shot Wound
(H)ematoma
(LAC)eration
(PW)Puncture Wound
(SS)Seatbelt Sign
(SW)Stab Wound
(P)ain
(PP)Peppering

Pulses Present
S= Strong
W= Weak
D= Doppler
A=Absent



1.5 HISTORY AND PHYSICAL

Head & Neck :

Chest:

Abdomen/Back and Spine:

Pelvis: ☐ Stable ☐ Unstable ☐ Binder

Upper Extremities:

Lower Extremities:

Interventions Prior to Arrival:

1.6 PRE / INITIAL PROCEDURES / DIAGNOSTICS

Pre / Initial
☐ ☐ Cric
☐ ☐ ICP Monitor
☐ ☐ Ventric

Pre / Initial
☐ ☐ C-Collar/ Time Removed _____
☐ ☐ Cantholysis & Canthotomy ☐ R ☐ L
☐ ☐ Tympanic Membranes Rupture ☐ R ☐ L
Blood ☐ R ☐ L
☐ ☐ Eye Shield ☐ R ☐ L

Needle Decompression ☐ R ☐ L Pericardial FAST ☐ - / ☐ + describe: _____
Output ☐ Air Blood (cc) _____
☐ Pericardiocentesis

DPL ☐ Gross Blood: ☐ - / ☐ + describe _____
Log Roll Time _____
Back Exam ☐ WNL ☐ ABNL describe _____
Rectal Exam ☐ WNL ☐ Weak/Absent Tone Gross Blood: ☐ - / ☐ +

Prostate _____
Gyn _____

☐ Closed Reduction ☐ EXT Fixation ☐ Tourniquet ☐ R # _____ ☐ L # _____
☐ Wound Washout ☐ Splint

☐ Closed Reduction ☐ EXT Fixation ☐ Tourniquet ☐ R # _____ ☐ L # _____
☐ Wound Washout ☐ Splint

☐ Sedated ☐ 3% Saline ☐ Cntrl Line Loc _____ Site _____
☐ Chemical Paralyze ☐ Mannitol ☐ IO Loc _____ Site _____
☐ Seizure Protocol ☐ A-Line Loc _____ Site _____

1.7 PUPILS / VISION

Brisk	☐ R	☐ L	Hand Motion	☐ R	☐ L		
Sluggish	☐ R	☐ L	Light Perception	☐ R	☐ L		
NR	☐ R	☐ L	No Light Perception	☐ R	☐ L		

Size Right mm _____ Left mm _____

1.8 BURN
☐ 1st ☐ 2nd ☐ 3rd
%TBSA _____
>20% Use the Burn Flow Sheet
Cause _____

1.9 EXTREMITIES

	Motor	Sens	ROM
RUE	+ ___ / - ___	+ ___ / - ___	+ ___ / - ___
LUE	+ ___ / - ___	+ ___ / - ___	+ ___ / - ___
RLE	+ ___ / - ___	+ ___ / - ___	+ ___ / - ___
LLE	+ ___ / - ___	+ ___ / - ___	+ ___ / - ___

PATIENT IDENTIFICATION Name: Last _____ First _____ MI _____ Rank _____
Patient ID/SSN _____ BRN _____ Medical Record # _____ DOB _____ Age _____ Gender ☐ M ☐ F
Facility Name _____ Facility Location _____ Physician Signature _____

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RESUSCITATION RECORD
Part II, Physician H&P

2. X-RAYS and CT

2.1 CT OBTAINED
- ☐ Head
- ☐ C-Spine
- ☐ Chest
- ☐ Abd/Pelvis
- ☐ Pan Scan*

* Select Pan Scan only if all of the above requested

2.2 X-RAYS OBTAINED
- ☐ C-Spine ☐ Extremity
- ☐ Spine ☐ RUE
- ☐ Chest/Upright ☐ LUE
- ☐ Pelvis ☐ RLE
- ☐ LLE

Other _____

Other _____

2.3 PENDING STUDIES

2.4 RESULTS (Include TEG/Rotem results)

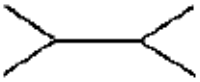
2.5 C-SPINE RESULTS
- ☐ CT Scan Normal
- ☐ CT Scan Abnormal

C-Spine cleared based on:
- ☐ Normal Exam, reliable Pt
- ☐ Normal CT scan, normal exam

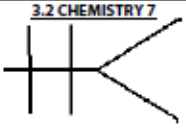
C-Spine not cleared based on:
- ☐ Neuro c/o, abnormal exam
- ☐ Abnormal imaging
- ☐ Unreliable Pt

3. LABORATORY RESULTS

3.1 CBC



3.2 CHEMISTRY 7



3.3 PT / INR / PTT _____ / _____ / _____

3.4 LFT

Amylase _____ Bili _____

Alk Phos _____ SGOT _____

LDH _____ SGPT _____

Other _____

3.5 URINALYSIS

SpGr _____ Chem _____

Micro _____ HCG _____

pH _____ Bact _____

WBC _____ RBC _____

4. IMPRESSION

5. DIAGNOSES

1	4
2	5
3	6

6. PLAN

6.1 PLAN

6.2 TRIAD INDICATORS UPON ARRIVAL IN ED

Temp < 96F/36C ☐ Yes ☐ No INR >1.4 ☐ Yes ☐ No Base Deficit >5 ☐ Yes ☐ No

FWB Requested ☐ Yes ☐ No

Damage Control ☐ Yes ☐ No

6.3 DISPOSITION ☐ OR ☐ ICU ☐ ICW ☐ Transfer Date: _____ Time: _____

7. DNBI / NBI CATEGORY

- ☐ Injury, Sports
- ☐ Injury, MVC
- ☐ Injury, Work/Training
- ☐ Injury, Other
- ☐ Surgical
- ☐ _____
- ☐ _____

8. CAUSE OF DEATH

8.1 ANATOMIC

☐ Airway ☐ Neck ☐ Abdomen ☐ Extremity ☐ U / ☐ L

☐ Head ☐ Chest ☐ Pelvis ☐ Other, Specify _____

8.2 PHYSIOLOGIC

☐ MOF ☐ Sepsis ☐ Total Body Disruption

☐ CNS ☐ Hemorrhage ☐ Breathing

☐ Other, Specify _____

PATIENT IDENTIFICATION Name: Last _____ First _____ MI _____ Patient ID/SSN _____

BRN _____ Facility Location _____ Physician Name _____ Physician Signature _____

DD FORM 3019, OCT 2015

Page 5 of 5

APPENDIX B: TACEVAC DA4700 FORM

DA4700 Page 1 of 3

MEDICAL RECORD-SUPPLEMENTAL MEDICAL DATA

For use of this form, see AR 40-66; the proponent agency is the Office of the Surgeon General

Reset Form

REPORT TITLE

Tactical Evacuation After Action Report & Patient Care Record, *Page 1*

JTS APPROVED (Date) (12 Jul 2018) -V4.1

Event: Date ____ Time ____ Time Zone ◯L ◯Z MM ( ) ____ Pt # ____ of ____ Tail to Tail ◯Y ◯N Leg # ____ of ____

9-Line: Time ____ Platform ____ Dispatch Cat ____ Assessed Cat ____

Trauma MIST Report: *M=Mechanism of Injury, I=Injury, S=Signs & Symptoms, T=Treatments* / **Disease Diagnosis:** ____

M ____ I ____ S ____ T ____

Comments ____

Pickup: Time ____ Role ____ Other ____ Region ____ Other ____ Location ____

Dropoff: Time ____ Role ____ Other ____ Region ____ Other ____ Location ____

Capability ☐EMT-B ☐EMT-I ☐EMT-P ☐EMT-FPC ☐RN ☐CRNA ☐PA ☐MD/DO Other ____

Circulation-Hemorrhage Control

☐ Direct Pressure
☐ Hemostatic Dressing
☐ Kerlix Dressing
☐ Pressure Dressing
Other ____

Tourniquet
Prior TQ: Reassess/tighten
◯Y ◯N ◯N/A

Time On ____ ☐CAT ☐SOFTT ☐Other ____ ☐RUE ☐LUE ☐RLE ☐LLE #____
Time On ____ ☐CAT ☐SOFTT ☐Other ____ ☐RUE ☐LUE ☐RLE ☐LLE #____
Time On ____ ☐CAT ☐SOFTT ☐Other ____ ☐RUE ☐LUE ☐RLE ☐LLE #____
Time On ____ ☐CAT ☐SOFTT ☐Other ____ ☐RUE ☐LUE ☐RLE ☐LLE #____
Time On ____ ☐AAJT ☐CRoC ☐JETT ☐SAM ☐Other Junctional ____ #____
TQ Comments ____

Airway

☐Self ☐NPA ☐OPA ☐Cric ☐Trach ☐ETT ☐SGA Type ____

Tube Size ____ Pos ____ @ ____ Confirmed ☐BS ☐Vis ☐$ETCO_2$

O_2 Source ☐NC ☐NRB ☐BVM ☐Vent LPM ____

Intubated ☐Prior to transport ☐By transport crew **Suction** ☐ETT ☐Yaunker

Breathing

Needle Decompression
Time ____ ☐R ☐L ☐Mid-ax ☐Mid-clav
Time ____ ☐R ☐L ☐Mid-ax ☐Mid-clav
Time ____ ☐R ☐L ☐Mid-ax ☐Mid-clav
Time ____ ☐R ☐L ☐Mid-ax ☐Mid-clav

Chest Tube Time ____ ☐R ☐L

Chest Equal Rise and Fall
◯Y ◯N ◯N/A

Respiratory Effort
☐Unlabored ☐Labored
☐Agonal ☐Assisted

Vent Settings

	Time	Mode	Rate	TV	FiO_2	PEEP	PIP	$ETCO_2$
Initial								
Change								
Change								
Change								

Annotate Injuries

(AMP)utation
(BL)eeding
(B)urn % TBSA ____
(C)repitus
(D)eformity
(DG)Degloving
(E)cchymosis
(FX)Fracture
(GSW)Gunshot Wound
(H)ematoma
(IMP)Impaled Object
(LAC)eration
(P)ain
(PP)Peppering
(PW)Puncture Wound
(SQA)Subcutaneous Air
(TBI)Suspect
Other ____

Circulation - Assessment

Rhythm / Ectopy
☐NSR ☐SVT
☐ST ☐VT
☐SB ☐VF
☐PEA
☐Paced
☐Asystole
☐A-FIB
☐A-FLUT

Pulses *A, D, +1, +2, +3*
RAD ____
BRAC ____
CAR ____
FEM ____
PED ____
TEMP ____

Circulation - Resuscitation

Transfusion Indication
☐Amputation
☐HR > 120
☐SBP < 90

Blood Infusion

Time	Component	ABO/RH	Unit Number	Exp. Date	Blood Age

IV Lines

Peripheral
Hand ☐R ☐L ga ____
Arm ☐R ☐L ga ____
EJ ☐R ☐L ga ____

IO Type / Site
☐Fast-1 ☐EZ IO Other ____
Humerus ☐R ☐L
Tibia ☐R ☐L
☐Sternum

Central Line Location
☐Triple lumen ____
☐Cordis ____

Arterial Line
Wrist ☐R ☐L
Groin ☐R ☐L

PREPARED BY *(Name, Rank & Title)* ____ DEPARTMENT/SERVICE/CLINIC *(Treating Unit)* ____ DATE ____

PATIENT'S IDENTIFICATION *(Name: last, first, middle; grade; date; hospital or medical facility)*

Last Name ____ First Name ____ MI ____

BR# ____ Rank ____ Unit ____ Pt Cat ____

SSN ____ DOB ____ Gender ◯M ◯F Allergy ____ Other ____

☐HISTORY/PHYSICAL ☒TREATMENT
☐DIAGNOSTIC STUDIES ☐FLOW CHART
☐OTHER EXAMINATION OR EVALUATION
☐OTHER, Specify

DA FORM 4700, FEB 2003 EDITION OF MAY 78 IS OBSOLETE. JTS TACEVAC AAR & PCR OP 05 (MCMR-SRJ) NOV 2014 APD PE v1.01ES

MEDICAL RECORD-SUPPLEMENTAL MEDICAL DATA

For use of this form, see AR 40-66; the proponent agency is the Office of the Surgeon General

REPORT TITLE

Tactical Evacuation After Action Report & Patient Care Record, *Page 2*

JTS APPROVED (Date) (12 Jul 2018) -V4.1

Vital Signs

	Time	HR	BP	RR	SpO2	ETCO2	Temp	F	C	AVPU	GCS: Eyes 1-4	Verbal 1-5	Motor 1-6	Total	Pain 0-10
First			/					○	○						
			/					○	○						
			/					○	○						
Last			/					○	○						

PERRLA ☐ R Size (mm) ____ ☐ L Size (mm) ____

Field Ultrasound Results ____ Other Diagnostics ____

Additional Interventions

	Time		Time	
Foley	____	Comment ____	**Gastric Tube**	____ ☐ Oral ☐ Nasal Comment ____
Protection	____	☐ Eye Shield ☐ Protective Eyewear ☐ Right ☐ Left Comment ____		
Immobilization	____	☐ C-Collar ☐ C-Spine ☐ Spine Board ☐ Pelvic Splint ☐ Pelvic Binder, Type ____		
	____	☐ Splint, Type/Location ____		
Warming	____	☐ Hypothermia Prevention, Product ____		
	____	☐ Hypothermia Prevention, Product ____		
Other Interventions	____	____		
	____	____		

Medications and Fluids *Route = IM, IN, IO, IV, PO, PR, SL, SQ*				**Medications and Fluids** *Route = IM, IN, IO, IV, PO, PR, SL, SQ*			
Time	Drug / Fluid	Dose	Route	Time	Drug / Fluid	Dose	Route

Documents Received ☐ TCCC Card ☐ Patient Chart ☐ None Other ____

Narrative Summary of Care

Enroute Care Provider

Last Name	First Name	Rank	Capability	Signature
				SIGN HERE
				SIGN HERE

Email PCR to: usarmy.jbsa.medcom-aisr.list.jts-prehospital@mail.mil **MM ( ) ____**

PREPARED BY SIGN HERE *(Signature & Title)* | DEPARTMENT/SERVICE/CLINIC *(Treating Unit)* | DATE

PATIENT'S IDENTIFICATION *(Name: last, first, middle; grade; date; hospital or medical facility)*

Last Name ____ First Name ____ MI ____

BR# ____ Rank ____ Unit ____ Pt Cat ____

SSN ____ DOB ____ Gender ○ M ○ F Allergy ____ Other ____

☐ HISTORY/PHYSICAL ☒ TREATMENT

☐ DIAGNOSTIC STUDIES ☐ FLOW CHART

☐ OTHER EXAMINATION OR EVALUATION

☐ OTHER, Specify

DA FORM 4700, FEB 2003 EDITION OF MAY 78 IS OBSOLETE. **JTS TACEVAC AAR & PCR OP 05 (MCMR-SRJ) NOV 2014** APD PE v1.01ES

DA4700 Page 3 of 3

TACTICAL EVACUATION-AFTER ACTION REPORT & PATIENT CARE RECORD

Page 3

IAW AR 40-68 (RAR) 22 May 2009 Paragraph 3–7. This page is a quality assurance document. Do not file in medical records.

Casualty's Protective Equipment *(Check all worn)*

☐ Helmet, Ballistic	☐ Plate Front	☐ Neck Protector *(Back)*	☐ Groin Shield	☐ Blast Gauge
☐ Tactical Vest *(IOTV)*	☐ Plate Back	☐ Throat Protector *(Front)*	☐ Pelvic Undergarment Tier 1	☐ Blast Sensor Helmet
☐ Eye Protection	☐ Plate Right Side	☐ Deltoid Right	☐ Pelvic Undergarment Tier 2	☐ Blast Sensor Other
☐ Ear Protection	☐ Plate Left Side	☐ Deltoid Left		

AAR Discussion Event Date _____ ☐ Tactical situation complicated care *(Explain in discussion)*

Sustains	Improves

PATIENT'S IDENTIFICATION *(Name: last, first, middle; grade; date; hospital or medical facility)*

Last Name _____ First Name _____ MI ____

BR# _____ Rank _____ Unit _____

SSN _____ DOB _____ Gender ◯ M ◯ F Pt Cat _____

Date _____ Allergy _____ Other _____

The *National Defense Authorization Act* for fiscal year 1987 (Public Law (PL) No. 99-661), section 1102, Title 10, (10USC 1102) this document was created by or for the DOD in a medical QA program and is confidential and privileged. PL 99-661 and subsequent guidance predicated on this law (10 USC 1102) preclude disclosure of, or testimony about, any records or findings, recommendations, evaluations, opinions, or actions taken as part of a QA program except in limited situations. Under the provisions of 10 USC 1102, this information is exempt from release in accordance with Exemption 3 of the FOIA. Additional detailed information regarding the confidentiality of QA documents and records is contained in appendix B.

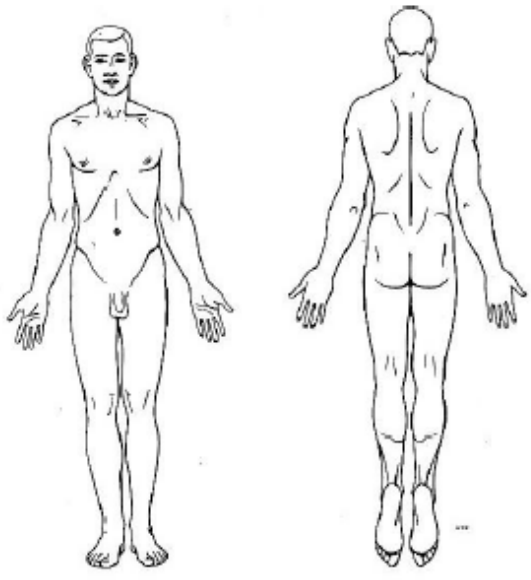
APPENDIX C: LUND BROWDER BURN ESTIMATE & DIAGRAM

Adult Lund Browder Burn Estimate and Diagram

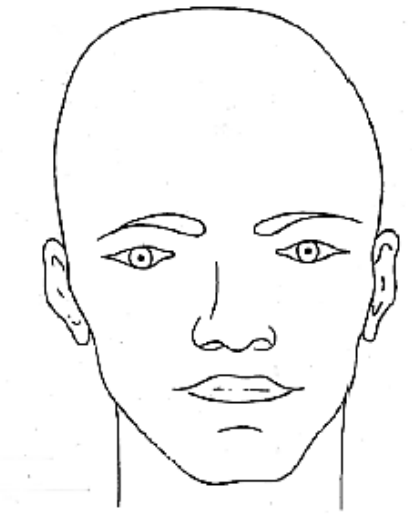
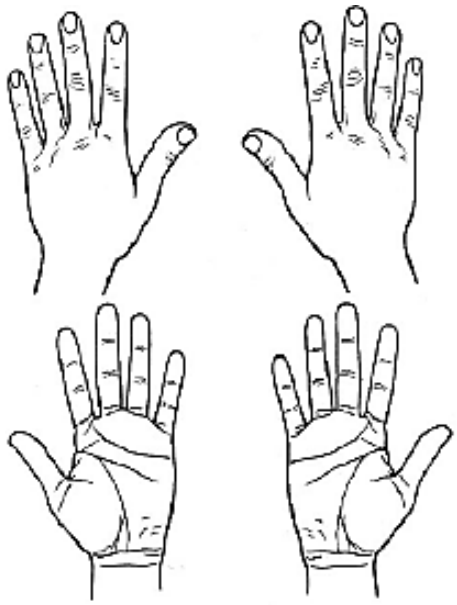
Total Area front/back (circumferential)		one side--anterior	one side--posterior	Do not include in total TBSA			
	Adult	adult	adult	1st °	2nd °	3rd °	TBSA
Head	7	3.5	3.5				0
Neck	2	1	1				0
Anterior trunk*	13	13	0				0
Posterior trunk*	13	0	13				0
Right buttock	2.5	na	2.5				0
Left buttock	2.5	na	2.5				0
Genitalia	1	1	na				0
Right upper arm	4	2	2				0
Left upper arm	4	2	2				0
Right lower arm	3	1.5	1.5				0
Left lower arm	3	1.5	1.5				0
Right hand	2.5	1.25	1.25				0
Left hand	2.5	1.25	1.25				0
Right thigh	9.5	4.75	4.75				0
Left thigh	9.5	4.75	4.75				0
Right leg	7	3.5	3.5				0
Left leg	7	3.5	3.5				0
Right foot	3.5	1.75	1.75				0
Left foot	3.5	1.75	1.75				0
	100	48	52	0	0	0	0

Age:	
Sex:	
Weight:	

Patient Identification



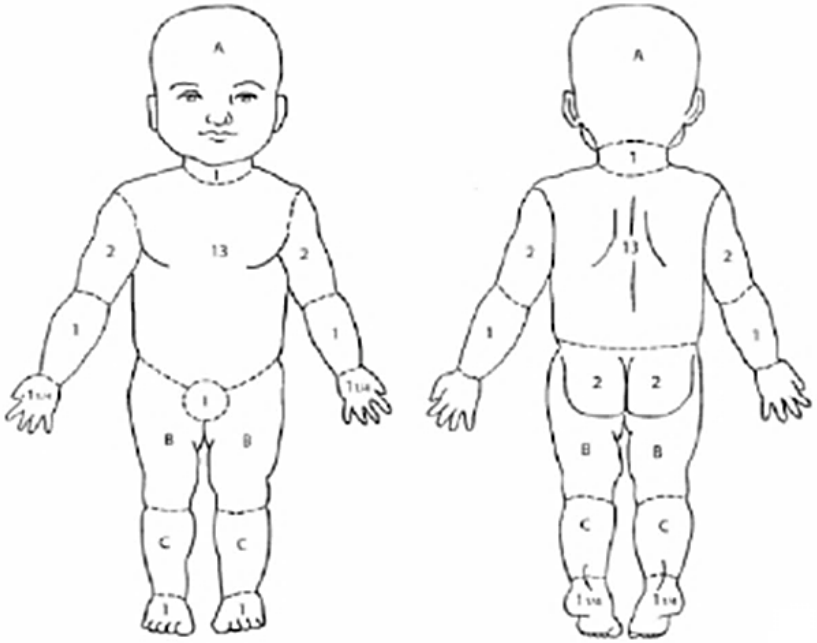
Adult Burn Diagram

Head	**Hands**
	
DATE:	DATE:
	2nd:
NAME:	3rd:
	TOTAL:

Infant Burn Estimate and Diagram

Total Area front/back (circumferential)	1 to 4 years	5 to 9 years	10 to 14 years	15 years	Do not include in total TBSA 1st	2nd °	3rd °	TBSA
Head	17	13	11	9				0
Neck	2	2	2	2				0
Anterior trunk*	13	13	13	13				0
Posterior trunk*	13	13	13	13				0
Right buttock	2.5	2.5	2.5	2.5				0
Left buttock	2.5	2.5	2.5	2.5				0
Genitalia	1	1	1	1				0
Right upper arm	4	4	4	4				0
Left upper arm	4	4	4	4				0
Right lower arm	3	3	3	3				0
Left lower arm	3	3	3	3				0
Right hand	2.5	2.5	2.5	2.5				0
Left hand	2.5	2.5	2.5	2.5				0
Right thigh	6.5	8	8.5	9				0
Left thigh	6.5	8	8.5	9				0
Right leg	5	5.5	6	6.5				0
Left leg	5	5.5	6	6.5				0
Right foot	3.5	3.5	3.5	3.5				0
Left foot	3.5	3.5	3.5	3.5				0

1	
2	
3	



APPENDIX D: JTS BURN RESUSCITATION WORK SHEET

(page 1 of 2)

Initiate AFTER completion of trauma assessment and interventions
Adults only: Refer to Burn CPG for pediatric specific recommendations

1. Contact USAISR Burn Center (DSN 312-429-2876) or email: burntrauma.consult.army@mail.mil
Date/Time contact: _____POC:_____ by:_____

2. Estimated Pre-burn Weight (wt): _____kg (Average Service Members are 82 ± 15 kg)

3. Estimate Total Burn Surface Area (TBSA) using Rule of Nines (refine with Lund-Browder after wounds are cleansed)

Partial thickness (2nd)_____% + Full thickness (3rd)_____% = **TBSA**_____%

IF TBSA >40%: intubate (use ETT ≥ 7.5 fr to facilitate bronchoscopy)

IF TBSA <15%: formal resuscitation may not be required, provide maintenance and/or oral fluids

4. Standard Burn Resuscitation Fluid: Lactated Ringers (LR) or Plasmalyte

5. Calculate INITIAL Fluid Rate using Rule of 10 (adults):

- IF wt < 40kg: 2ml x %TBSA_____ x wt(kg)_____ ÷ 16 = _____ml/hr
- IF wt ≥ 40kg: %TBSA_____ x 10 = _____ml/hr
  - IF wt > 80kg: add 100ml/hr to initial rate for every 10 kg>80: adjusted initial fluid rate = _____ml/hr
  - (Example: 100kg patient with 50% TBSA burn = 50% x 10 = 500 ml + 200 ml = 700 ml for first hour)

6. If Inhalation Injury Present: administer aerosolized heparin in albuterol (5,000 units Q4 hours)

7. Titrate Resuscitation Fluid: maintain target **UOP 30-50ml/hr** (Q 1 hour)

- If rhabdomyolysis present: use target UOP 75-100 ml/hr (Contact USAISR Burn Center DSN 312-429-2876)
- Goals: UOP >30 but <50ml/hr; adequate tissue perfusion (normalized lactate/base deficit), MAP >55 mmHg
- Minimum fluid rate 125mL/hr LR
- * Avoid fluid boluses
- ** Too much fluid as dangerous as too little

High risk for over resuscitation/abdominal compartment syndrome:

- If hourly rate >1500mL/hr x 2 hrs OR
- If total 24 hr volume exceeds: wt(kg) x 250ml= _____ml (includes all infused fluids)
  - Contact USAISR Burn Center (DSN 312-429-2876)
  - Consider adjuncts (below)
  - Check bladder pressures Q4hrs (>20 mmHg notify physician)
  - Avoid surgical decompression (significant mortality risk in burns)

Adjuncts:

1. Colloids: 5% albumin/FFP (hextend only if others unavailable)
   - * Colloids not preferred until hour 8-12; can consider earlier in difficult resuscitation
   - Infuse at ml/hr according to chart below based on adult patient weight and burn size
2. Vasopressors: Contact USAISR Burn Center (DSN 312-429-2876)

5% Albumin Infusion (ml/hr)	30-49%TBSA	50-69% TBSA	70-100% TBSA
<70 kg	30	70	110
70-90 kg	40	80	140
>90 kg	50	90	160

Ensure adequate volume (CVP trend 6-8 cm H_2O); **maintain MAP > 55 mmHg**

- Maintain ionized Ca >1.1 mmol/L

JTS Burn Resuscitation Work Sheet (page 2 of 2)

- Start with vasopressin 0.04mg/min. **DO NOT TITRATE**
- Second line pressor: norepinepherine 2-20mcg/min
- Refractory shock: consider epinephrine or phenylephrine infusion
- Refractory shock: consider adrenal insufficiency, give hydrocortisone 100mg IV Q8 hrs
- Manage acidemia (pH<7.2): use ventilator interventions first, then bicarbonate or THAM infusion
- Renal replacement therapy if available (Contact USAISR Burn Center DSN 312-429-2876)

Assessment/Interventions:

- Complete full secondary trauma exam
- Ensure thermoregulation; administer warmed fluids; cover with space blanket; elevate burned extremities
- Superficial burn (1st degree): Sunburn, no blister, blanch readily; NOT included in TBSA
- Partial thickness (2nd degree): Blanch, moist, blisters, sensate
- Full thickness (3rd degree): Leathery, white, non-blanching, dry, insensate, thrombosed vessels
- Protect eyes with moisture shields if corneas exposed or blink reflex slow; apply ophthalmic erythromycin ointment at least Q2hrs.
- **Prompt intubation for facial burns, suspected inhalation injury, TBSA >40%**
  - Anticipate induction-associated hypotension
  - Secure ETT with cloth tie, not adhesive tape
  - Reassess ETT position at teeth Q1 hr as edema develops and resolves
  - Intubated patients require oro/naso-gastric tube for decompression
  - Administer IV proton-pump inhibitor
- Monitor bladder pressure at least Q4hrs for large burns or high volume resuscitations
  - Abdominal compartment syndrome: decreased UOP, increased pulmonary pressures, difficulty ventilating, bladder pressure remains > 20 mmHg
  - Avoid decompressive laparotomy; consider percutaneous peritoneal drainage
  - Reduce crystalloid volume using colloid or vasopressors
- Monitor pulses hourly: palmar arch, dorsalis pedis, posterior tibial with Doppler
  - Consider escharotomy if signal diminished; refer to Burn CPG for technique (Call USAISR Burn Center DSN 312-429-2876)
- Monitor extremity compartment pressures as clinically indicated
  - Elevate burned extremities at all times
  - Extremity compartment syndrome: pain, paresthesia, pallor, paralysis, pulselessness (late sign)
  - Fasciotomy may be required
- Wound care
  - Thoroughly cleanse burn wounds, preferably in Operating Room
  - Select topical antimicrobial in consultation with Burn Surgeon (Call USAISR Burn Center DSN 312-429-2876) based on product availability, expected transport time, etc
  - Acceptable to cover burns with dry sheets or clean dressings for first 48 hours
- All definitive burn surgery done at USAISR Burn Center for US Service Members (DSN 312-429-2876)

APPENDIX E: JTS BURN RESUSCITATION FLOW SHEET

JTS Burn Resuscitation Flow Sheet – page 1 of 3

Date		Initial Treatment Facility					
Name		SSN	Pre-burn estimated weight (kg)	%TBSA (Do not include superficial 1st degree burn)	Calculate Rule of Tens (if >40<80kg, %TBSA x 10 = starting rate for LR	Calculate max 24hr volume (250ml x kg) Avoid over-resuscitation, use adjuncts if necessary	
Date &Time of Injury				BAMC/ISR Burn Team DSN 312-429-2876: Yes No			

Tx Site/ Team	HR from burn	Local Time	Crystalloid* (LR) / Colloid	Total	UOP (Target 30-50ml/hr)	Base Deficit/ Lactate	Heart Rate	MAP (>55) / CVP (6-8mmHg)	Pressors (Vasopressin 0.04 u/min) Bladder Pressure (Q4)
	1st								
	2nd								
	3rd								
	4th								
	5th								
	6th								
	7th								
	8th								
	9th								
	10th								
	11th								
	12th								
	13th								
	14th								
	15th								
	16th								
	17th								
	18th								
	19th								
	20th								
Total Fluids:					*Titrate LR hourly to maintain adequate UOP (30-50ml/hr) and perfusion				

JTS Burn Resuscitation Flow Sheet – page 2 of 3

Date		Initial Treatment Facility				
Name		SSN	Pre-burn estimated weight (kg)	%TBSA (Do not include superficial 1st degree burn)	Calculate Rule of Tens (if >40<80kg, %TBSA x 10 = starting rate for LR	Calculate max 24hr volume (250ml x kg) Avoid over-resuscitation, use adjuncts if necessary
Date &Time of Injury				BAMC/ISR Burn Team DSN 312-429-2876: Yes No		

Tx Site/ Team	HR from burn	Local Time	Crystalloid* (LR) / Colloid	Total	UOP (Target 30-50ml/hr)	Base Deficit/ Lactate	Heart Rate	MAP (>55) / CVP (6-8mmHg)	Pressors (Vasopressin 0.04 u/min) Bladder Pressure (Q4)
	25th								
	26th								
	27th								
	28th								
	29th								
	30th								
	31st								
	32nd								
	33rd								
	34th								
	35th								
	36th								
	37th								
	38th								
	39th								
	40th								
	41st								
	42nd								
	43rd								
	44th								
	45th								
	46th								
	47th								
	48th								
Total Fluids:					*Titrate LR hourly to maintain adequate UOP (30-50ml/hr) and perfusion				

JTS Burn Resuscitation Flow Sheet – page 3 of 3

Date		Initial Treatment Facility				
Name		SSN	Pre-burn estimated weight (kg)	%TBSA (Do not include superficial 1st degree burn)	Calculate Rule of Tens (if >40<80kg, %TBSA x 10 = starting rate for LR	Calculate max 24hr volume (250ml x kg) Avoid over-resuscitation, use adjuncts if necessary
Date &Time of Injury				BAMC/ISR Burn Team DSN 312-429-2876: Yes No		

Tx Site/ Team	HR from burn	Local Time	Crystalloid* (LR) / Colloid	Total	UOP (Target 30-50ml/hr)	Base Deficit/ Lactate	Heart Rate	MAP (>55) / CVP (6-8mmHg)	Pressors (Vasopressin 0.04 u/min) Bladder Pressure (Q4)
	49th								
	50th								
	51st								
	52nd								
	53rd								
	54th								
	55th								
	56th								
	57th								
	58th								
	59th								
	60th								
	61st								
	62nd								
	63rd								
	64th								
	65th								
	66th								
	67th								
	68th								
	69th								
	70th								
	71st								
	72nd								
Total Fluids:					*Titrate LR hourly to maintain adequate UOP (30-50ml/hr) and perfusion				

APPENDIX D: CERVICAL SPINE CLEARANCE STATUS NOTES

Cervical Spine Clearance Status Notes

Joint Trauma System

Mechanism: ☐ Explosive ☐ M/C ☐ Fall ☐ Other

Notes:

Collar placed: ☐ Prehospital ☐ Hospital ☐ No collar

Patient reliable? ☐ Yes ☐ No Reason unreliable? ☐ Altered Mental Status (GCS<15) ☐ Significant Distracting Injury

Notes:

Patient complaints ☐ None ☐ Neck pain (specify location:) ☐ Paresthesia

Notes:

Physical Findings

Inspection: ☐ Normal ☐ Abnormal specify:

Palpation: ☐ Normal ☐ Point tenderness ☐ Deformity

Notes:

Active range of motion: ☐ Full ☐ Limited specify:

Notes:

Imaging Studies (CT is standard. Films acceptable only when CT is unavailable.)

CT scan: ☐ Normal ☐ Abnormal specify:

Notes:

Lateral: ☐ Normal ☐ Abnormal specify:

AP: ☐ Normal ☐ Abnormal specify:

Odontoid: ☐ Normal ☐ Abnormal specify:

C L E A R A N C E

Cervical spine is:

☐ CLEAR of significant injury and instability on the basis of the following:
- ☐ Normal exam in completely reliable patient with no need for imaging
- ☐ Normal imaging of full C-Spine and normal exam.

☐ NOT CLEAR on the basis of the following:
- ☐ Neurological complaint or abnormal physical exam finding
- ☐ Abnormal imaging
- ☐ Unreliable patient at time of evacuation/final disposition

Physician name Physician signature

MTF Date

Medical Record (Rev. May 2018)

APPENDIX E: ISNCSCI DIAGRAM

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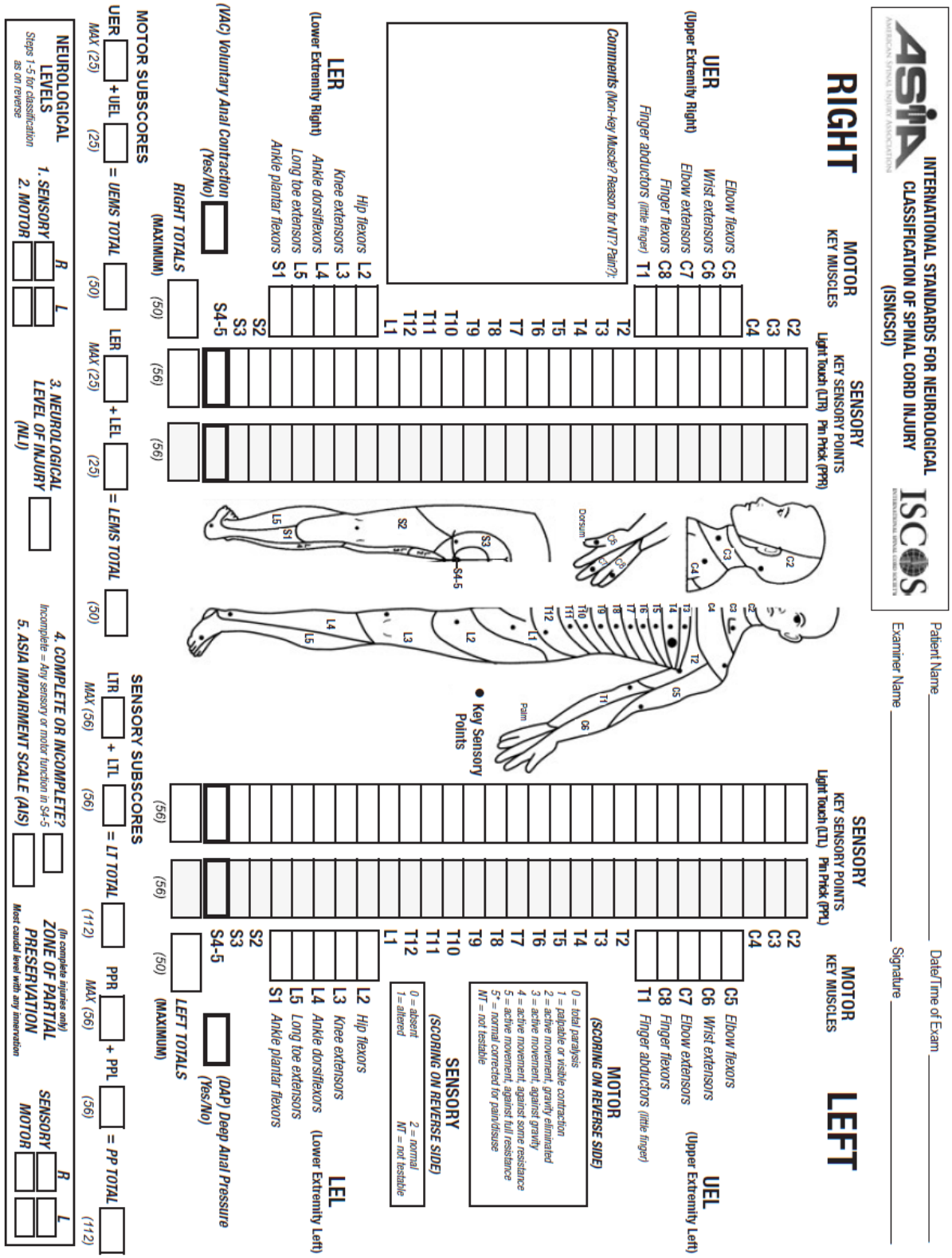

Muscle Function Grading

0 = total paralysis

1 = palpable or visible contraction

2 = active movement, full range of motion (ROM) with gravity eliminated

3 = active movement, full ROM against gravity

4 = active movement, full ROM against gravity and moderate resistance in a muscle specific position

5 = (normal) active movement, full ROM against gravity and full resistance in a functional muscle position expected from an otherwise unimpaired person

5* = (normal) active movement, full ROM against gravity and sufficient resistance to be considered normal if identified inhibiting factors (i.e. pain, disuse) were not present

NT = not testable (i.e. due to immobilization, severe pain such that the patient cannot be graded, amputation of limb, or contracture of > 50% of the normal ROM)

Sensory Grading

0 = Absent

1 = Altered, either decreased/impaired sensation or hypersensitivity

2 = Normal

NT = Not testable

When to Test Non-Key Muscles:

In a patient with an apparent AIS B classification, non-key muscle functions more than 3 levels below the motor level on each side should be tested to most accurately classify the injury (differentiate between AIS B and C).

Movement	Root level
Shoulder: Flexion, extension, abduction, adduction, internal and external rotation **Elbow:** Supination	C5
Elbow: Pronation **Wrist:** Flexion	C6
Finger: Flexion at proximal joint, extension. **Thumb:** Flexion, extension and abduction in plane of thumb	C7
Finger: Flexion at MCP joint **Thumb:** Opposition, adduction and abduction perpendicular to palm	C8
Finger: Abduction of the index finger	T1
Hip: Adduction	L2
Hip: External rotation	L3
Hip: Extension, abduction, internal rotation **Knee:** Flexion **Ankle:** Inversion and eversion **Toe:** MP and IP extension	L4
Hallux and Toe: DIP and PIP flexion and abduction	L5
Hallux: Adduction	S1

ASIA Impairment Scale (AIS)

A = Complete. No sensory or motor function is preserved in the sacral segments S4-5.

B = Sensory Incomplete. Sensory but not motor function is preserved below the neurological level and includes the sacral segments S4-5 (light touch or pin prick at S4-5 or deep anal pressure) AND no motor function is preserved more than three levels below the motor level on either side of the body.

C = Motor Incomplete. Motor function is preserved at the most caudal sacral segments for voluntary anal contraction (VAC) OR the patient meets the criteria for sensory incomplete status (sensory function preserved at the most caudal sacral segments (S4-S5) by LT, PP or DAP), and has some sparing of motor function more than three levels below the ipsilateral motor level on either side of the body.
(This includes key or non-key muscle functions to determine motor incomplete status.) For AIS C – less than half of key muscle functions below the single NLI have a muscle grade ≥ 3.

D = Motor Incomplete. Motor incomplete status as defined above, with at least half (half or more) of key muscle functions below the single NLI having a muscle grade ≥ 3.

E = Normal. If sensation and motor function as tested with the ISNCSCI are graded as normal in all segments, and the patient had prior deficits, then the AIS grade is E. Someone without an initial SCI does not receive an AIS grade.

Using ND: To document the sensory, motor and NLI levels, the ASIA Impairment Scale grade, and/or the zone of partial preservation (ZPP) when they are unable to be determined based on the examination results.

ASIA
American Spinal Injury Association

INTERNATIONAL STANDARDS FOR NEUROLOGICAL CLASSIFICATION OF SPINAL CORD INJURY

ISCOS
International Spinal Cord Society

Steps in Classification

The following order is recommended for determining the classification of individuals with SCI.

1. Determine sensory levels for right and left sides.
The sensory level is the most caudal, intact dermatome for both pin prick and light touch sensation.

2. Determine motor levels for right and left sides.
Defined by the lowest key muscle function that has a grade of at least 3 (on supine testing), providing the key muscle functions represented by segments above that level are judged to be intact (graded as a 5).
Note: in regions where there is no myotome to test, the motor level is presumed to be the same as the sensory level, if testable motor function above that level is also normal.

3. Determine the neurological level of injury (NLI)
This refers to the most caudal segment of the cord with intact sensation and antigravity (3 or more) muscle function strength, provided that there is normal (intact) sensory and motor function rostrally respectively.
The NLI is the most cephalad of the sensory and motor levels determined in steps 1 and 2.

4. Determine whether the injury is Complete or Incomplete.
(i.e. absence or presence of sacral sparing)
*If voluntary anal contraction = **No** AND all S4-5 sensory scores = **0** AND deep anal pressure = **No,** then injury is **Complete.***
*Otherwise, injury is **Incomplete.***

5. Determine ASIA Impairment Scale (AIS) Grade:

Is injury Complete? **If YES, AIS=A** and can record ZPP (lowest dermatome or myotome on each side with some preservation)

NO ↓

Is injury Motor Complete? **If YES, AIS=B**

NO ↓ (No=voluntary anal contraction OR motor function more than three levels below the motor level on a given side, if the patient has sensory incomplete classification)

Are at least half (half or more) of the key muscles below the neurological level of injury graded 3 or better?

NO ↓ **AIS=C** **YES** ↓ **AIS=D**

If sensation and motor function is normal in all segments, AIS=E
Note: AIS E is used in follow-up testing when an individual with a documented SCI has recovered normal function. If at initial testing no deficits are found, the individual is neurologically intact; the ASIA Impairment Scale does not apply.