CPP TCCC

COMBAT PARAMEDIC/PROVIDER

TACTICAL COMBAT CASUALTY CARE

MODULE 18

BURNS

Skill Instructions

5 SEP 2022

Committee on Tactical Combat Casualty Care (CoTCCC)

BURN TREATMENT INSTRUCTION

TASK:	Treat burns in a Tactical Field Care (TFC) environment
CONDITION:	Given a TFC scenario where the casualty and responder are in combat gear, the casualty has sustained burns, and you have the necessary materials
STANDARD:	Treat the casualty's burns following all steps and meeting all performance measures without causing further injury to the casualty
EQUIPMENT:	Trauma shears, dry, sterile and/or clean dressing materials, Combat Wound Medication Pack, hypothermia prevention kit, and DD Form 1380 TCCC Casualty Card

PERFORMANCE MEASURES: step-by-step instructions

NOTE: All Tactical Combat Casualty Care interventions can be performed on or through burned skin in a burn casualty.
NOTE: Consider body substance isolation.
NOTE: If a Combat Lifesaver is available, direct them to assist.

1 Eliminate the source of the burn.

1 After removing the casualty from the source of the burn:
(a) Aggressively monitor airway status (for facial burns, especially those that occur in closed spaces) and consider early surgical airway for respiratory distress, associated with inhalation injury (refer to Airway Management in Tactical Field Care Skill Instructions).
(b) Cut clothing around the burned area.
(c) Gently lift clothing away from the burned area.
CAUTION: **Do not** forcefully remove clothing or material that is stuck to burnt skin.

2 Estimate total body surface area (TBSA) burned to the nearest 10%.

3 If the casualty's hand(s) or wrist(s) have been burned, remove jewelry (rings, watch) and place them in the casualty's pockets.

4 Apply sterile, dry dressings to burned skin areas.

5 Keep the casualty warm and prevent hypothermia.
NOTE: For extensive burns (>20%), place the casualty in the insulated hypothermia enclosure system to both cover the burned areas and prevent hypothermia.

6 If burns are greater than 20% of TBSA, fluid resuscitation should be initiated as soon as intravenous/intraosseous access is established (refer to Fluid Resuscitation for Burns Skill Instruction).

7 Analgesia may be administered to treat burn pain (refer to Pain Medications (Analgesia) Skill Instructions).

8 Administer antibiotics if penetrating wounds are found, to prevent infection (refer to Antibiotic Administration Skill Instructions).

9 Burn patients are particularly susceptible to hypothermia. Extra emphasis should be placed on barrier heat loss prevention methods.

10 Monitor the casualty closely for life-threatening conditions, check for other injuries, and treat for shock (if applicable).

11 Document all findings and treatments on a DD Form 1380 TCCC Casualty Card and attach it to the casualty.

FLUID RESUSCITATION FOR BURNS INSTRUCTION

TASK:	Fluid resuscitation for burns
CONDITION:	Given a Tactical Field Care scenario where the casualty and responder are in combat gear and the casualty has sustained burns greater than 20% of total body surface area (TBSA)
STANDARD:	Administer fluids according to the Committee on Tactical Combat Casualty Care (CoTCCC) Guidelines for fluid resuscitation, following the United States Army Institute of Surgical Research (USAISR) Rule of Ten
EQUIPMENT:	Lactated Ringer's, normal saline or Hextend®, intravenous (IV) / intraosseous (IO) tubing, established IV/IO access

PERFORMANCE MEASURES: step-by-step instructions

NOTE: If hemorrhagic shock is suspected from other injuries, fluid resuscitation for hemorrhagic shock takes precedence over burn resuscitation and fluids should be administered in accordance with CoTCCC Guidelines.
NOTE: Consider body substance isolation.
NOTE: If a Combat Lifesaver is available, direct them to assist.

1. Estimate TBSA burned to the nearest 10%.
   NOTE: If burns are greater than 20% of TBSA, initiate fluid resuscitation as soon as intravenous/intraosseous infusion access is established.
2. Select appropriate burn resuscitation fluid.
   NOTE: Burn resuscitation should be initiated in accordance with CoTCCC Guidelines with Lactated Ringers, normal saline, or Hextend. If Hextend is used, no more than 1,000 ml should be given, followed by Lactated Ringers or normal saline, as needed.
3. Calculate fluid administration rate (in accordance with USAISR Rule of Ten):
   (a) Percent TBSA x 10 ml/hr for adults weighing 40–80 kg (88–176 lbs).
   (b) For every 10 kg (22 lbs) **above** 80 kg (176 lbs), increase initial rate by 100 ml/hr.
   NOTE: Consider using oral fluids for burns up to 30% TBSA if casualty is conscious and able to swallow.
4. Record the time and volume of fluid that was (actually) **administered** during the first 24 hours of resuscitation.
5. Document all findings and treatments on a DD Form 1380 TCCC Casualty Card and attach it to the casualty.
   NOTE: Appropriate fluid resuscitation in the first 24 hours post-burn is **critical**.

FOLEY CATHETER INSTRUCTION

TASK:	Perform Urinary Catheterization
CONDITION:	While in the Tactical Field Care (TFC) phase, you encounter a casualty requiring urinary catheterization.

STANDARD:	Perform a urinary catheterization using clean technique and without causing further harm to the casualty.
EQUIPMENT:	Sterile urinary catheterization pack containing: 1) Sterile gauze sponges, 2) Urinary catheter, 3) Forceps, 4) Surgical lubricant, and 5) antiseptic solution (e.g., Betadine or Chlorhexidine), 5mL sterile water, 5mL syringe (or prefilled sterile water 5mL syringe in some kits) and sterile gloves and preconnected collection bag.

PERFORMANCE MEASURES: step-by-step instructions

NOTE: Consider body substance isolation.
NOTE: Direct Combat Lifesaver or Combat Medic/Corpsman to assist as needed.

1. Explain the procedure to casualty (if conscious).
2. Provide privacy for the casualty.
3. Position the casualty.
   Female: Supine, with the legs extended or flexed and spread approximately 45 degrees.
   Male: supine, with the legs extended.
4. Remove the outer wrapper from the catheter kit.
   CAUTION: If the kit is damaged, soiled, water-spotted, or outdated, it must be discarded and replaced.
5. Position the catheter kit in a place where it is easily accessible and sterility can be maintained.
6. Unfold the inner wrapper, creating a sterile field.
   CAUTION: Touching the inside of the inner wrapper will contaminate the unit.
7. Put on sterile gloves.

Foley Placement (Female)

8. Position the first drape (plastic-coated).
   (a) Aseptically remove and fully unfold the first drape.
   (b) Grasp the drape at the top edge (plastic side away), and fold the top of the drape over the gloved hands to make a cuff.
   (c) Place the drape, plastic side down, on the bed between the casualty's legs. Slip the cuffed edge under the casualty's buttocks.
9. Position the second drape (fenestrated).
   (a) Aseptically remove and fully unfold the second drape.
   (b) Place the drape over the genitalia ensuring the window exposes the labia.
10. Prepare Catheterization kit
    (a) Open the package of sterile lubricant, and squeeze it into a corner of the compartment in which it was stored in.
    (b) Open the package of antiseptic solution and pour it over the cotton balls.
    (c) Remove the plastic cover from the catheter and tubing (if included).
    NOTE: Preparation of catheterization kit sequence and configuration may differ between products.
11. Test the catheter's balloon.

(a) Attach the prefilled syringe to the valve on the catheter and twist it to lock it in place.

(b) Inject the contents of the syringe (usually 5 to 10 centimeters [cc] of water) into the balloon, and observe for leaks.

NOTE: If the balloon leaks, discard the equipment and begin the procedure again with new equipment.

(c) Deflate the balloon by aspirating the water back into the syringe, and leave the syringe in place.

12 Place the catheter back into the kit for later use

NOTE: If the kit does not come with a pre-connected urine drainage system, ensure the foley catheter is securely connected to the drainage system

13 Clean catheterization site with cotton balls or swabs covered in povidone iodine solution.

NOTE: Cotton balls should be held with forceps.

(a) Gently spread the labia open with the nondominant hand.

(b) Place the thumb and forefinger between the labia minora.

(c) Separate the labia and pull up slightly.

(d) With the dominant hand, clean the far labia with a cotton ball or swab, moving from the clitoris toward the anus.

(e) Use a second cotton ball or swab to clean the near labia.

(f) Use a third cotton ball or swab to clean down the center, directly over the urinary meatus.

(g) Keep the labia spread throughout the remainder of the procedure.

14 Lubricate the catheter.

(a) Pick up the catheter with the dominant hand about 4 inches from the tip while maintaining positive control of the remaining tubing.

(b) Apply lubricant to the catheter tip.

15 Instruct the casualty (if conscious) to relax and breathe through the mouth.

16 Insert the catheter.

(a) Gently insert the catheter into the urethra about 2 to 3 inches or until resistance is met.

(b) Continue to advance the catheter until urine begins to flow (about 2 to 3 inches further).

(c) Release the labia, and hold the catheter securely with the nondominant hand.

NOTE: If the vagina is inadvertently catheterized, do not remove the catheter. Assemble new equipment and repeat the procedure. Leaving the first catheter in place, temporarily, will prevent catheterizing the vagina a second time.

Foley Placement (Male)

8 Position the first drape (plastic-coated).

(a) Aseptically remove and fully unfold the first drape.

(b) Grasp the drape at the top edge (plastic side away), and fold the top of the drape over the gloved hands to make a cuff.

(c) Place the drape, plastic side down, across the casualty's thighs. Slip the cuffed edge under the penis.

9 Position the second drape (fenestrated).

(a) Aseptically remove and fully unfold the second drape.

(b) Place the drape over the genitalia exposing the penis through the drape opening.

10 Prepare Catheterization kit

(a) Open the package of sterile lubricant, and squeeze it into a corner of the compartment in which it was stored in.

(b) Open the package of antiseptic solution and pour it over the cotton balls.

(c) Remove the plastic cover from the catheter and tubing (if included).

NOTE: Preparation of catheterization kit sequence and configuration may differ between products.

11 Test the catheter's balloon.

(a) Attach the prefilled syringe to the valve on the catheter and twist it to lock it in place.

(b) Inject the contents of the syringe (usually 5 to 10 centimeters [cc] of sterile water) into the balloon, and observe for leaks.

NOTE: If the balloon leaks, discard the equipment and begin the procedure again with new equipment.

(c) Deflate the balloon by aspirating the sterile water back into the syringe, and leave the syringe in place.

12 Place the catheter back into the kit for later use

NOTE: If the kit does not come with a pre-connected urine drainage system, ensure the foley catheter is securely connected to the drainage system

13 Clean catheterization site with cotton balls or swabs covered in povidone iodine solution.

NOTE: Cotton balls should be held with forceps.

(a) Support the penis with the nondominant hand.

(b) With the dominant hand, clean the penis with a cotton ball or swab, moving in a circular motion from the urinary meatus toward the base of the glans.

(c) Repeat the procedure, using a second and third cotton ball or swab.

14 Lubricate the catheter.

(a) Pick up the catheter with the dominant hand about 4 inches from the tip while maintaining positive control of the remaining tubing.

(b) Apply lubricant to the catheter tip.

15 Instruct the casualty (if conscious) to relax and breathe through the mouth.

16 Insert the catheter.

(a) Draw the penis upward and forward to a 60- to 90-degree angle to the legs.

(b) Gently insert the catheter into the urethra, advancing it about 7 to 8 inches or until resistance is felt.

(c) Continue to advance the catheter until urine begins to flow (about 2 to 3 inches further).

(d) Lower the penis and hold the catheter securely with the nondominant hand while resting the hand on the casualty's pubis for support.

17 Inflate the catheter balloon with the prefilled syringe of sterile water.

NOTE: If the balloon is difficult to inflate, advance the catheter another 1/2 to 1 inch to ensure that the catheter tip is fully within the bladder.

(a) Remove the syringe from the catheter by using a twisting motion.

(b) Gently pull back on the catheter until resistance is met to ensure that the balloon is fully inflated and seated in the bladder.

18 Remove the drapes.

19 Secure the catheter to the inner thigh or stomach with tape.

NOTE: The penis may be positioned up or down (facing the casualty's head or feet), depending upon the diagnosis and/or the casualty's comfort preference.

20 Ensure the drainage bag is kept lower than the casualty at all times (especially during casualty movement) to allow free flow of urine into the drainage system.

CAUTION: If casualty is on a litter **DO NOT** secure the drainage system to the litter.

21 Dispose of the used equipment and clean the area.

22 Reposition the casualty, as needed

23 Document all findings and treatments on a DD Form 1380 TCCC Casualty Card and attach to the casualty.

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EQUIPMENT:	Sterile urinary catheterization pack containing: 1) Sterile gauze sponges, 2) Urinary catheter, 3) Forceps, 4) Surgical lubricant, and 5) antiseptic solution (e.g., Betadine or Chlorhexidine), 5mL sterile water, 5mL syringe (or prefilled sterile water 5mL syringe in some kits) and sterile gloves and preconnected collection bag.

PERFORMANCE MEASURES: step-by-step instructions

NOTE: Consider body substance isolation.
NOTE: Direct Combat Lifesaver or Combat Medic/Corpsman to assist as needed.

1 Explain the procedure to the casualty (if conscious).
(a) Inform the casualty of the purpose of taking the measurements.
(b) Inform the casualty of the length of time during which the intake and output will be measured.
(c) Inform the casualty of any orders on fluid intake, such as forcing fluids or restricting the amount of intake.

2 Explain to the casualty what types of items require intake and/or output measurement (if conscious).
(a) Intake measurement:
(1) Fluids consumed such as water, coffee, tea, broth, juice, milk, and carbonated beverages
(2) IV infusion fluids and blood
(3) Oral liquid medications
(4) Irrigating solutions that are not returned
(b) Output measurement:
(1) Urine
(2) Liquid stool
(3) Vomitus
(4) Drainage from wounds and suction devices

3 Measure the intake.
(a) Calculate the oral fluid intake:
(1) Note the type and size of the oral fluid containers
(2) Check the container to find the fluid capacity

4 Check the "equivalents table" on DD Form 792 (if available)
(b) Calculate the amount of IV solution or blood given.

5 Record the fluid intake under the appropriate heading on DD Form 792 or the substitute

record in cubic centimeters (cc).

6 Measure the output.

(a) Put on gloves.

(b) Record the level of output (urine, liquid stool, or emesis) in the graduated container.

NOTE: If it is not possible to weigh or measure liquid stool, estimate the amount.

(c) Estimate the amount of wound drainage, if present.

(d) Estimate any output not in a container, such as on the floor, skin, or sheets.

(e) Observe the characteristics of the output.

(1) Color, clarity, and odor of urine.

(2) Color, odor, and consistency of stool.

(3) Color, odor, and consistency of any drainage or suction material.

7 Remove gloves, and perform a casualty care handwash.

8 Record in cc the amount and characteristics of output under the appropriate headings on DD Form 792 or the substitute record.

NOTE: If no output was available to measure, enter this information in the REMARKS section of
DD Form 792 or the substitute record.

9 Compute accumulated intake and output totals at the end of the 24-hour period, and record on the appropriate forms.

10 Document all findings and treatments on a DD Form 1380 TCCC Casualty Card and attach it to the casualty.

Developed by the

JOINT TRAUMA SYSTEM

A Combat Support Division of the

DEFENSE HEALTH AGENCY