

# SEVERE BURN - TRANSFER CHECKLIST

## Nurse Checklist

**Please send a copy of this form with the patient for continuity of care**

Apply Patient Sticker Here

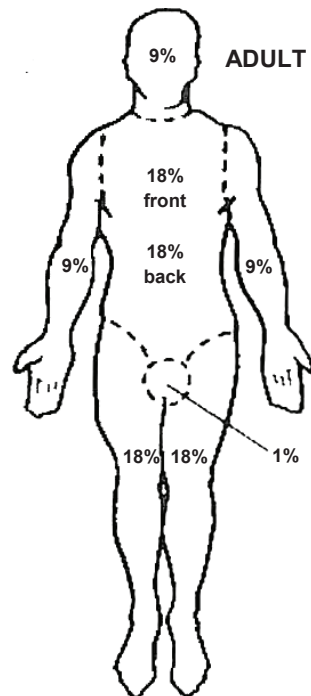
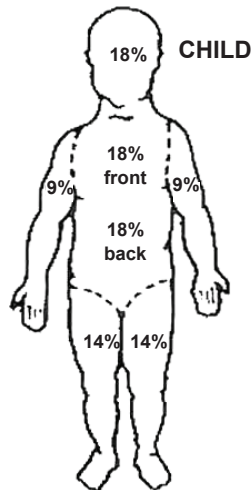
RN Name: _____ / Physician: _____ [Pre-print hospital name here]	
<b>Note times:</b>	
__: __	<b>Time of burn injury</b>
__: __	<b>Arrival time to ED</b>
	<b>IV Fluids:</b> Lactated Ringers (LR) is the fluid of choice recommended by the ABA. <ul style="list-style-type: none"> <li>Adult: Use LR, if available. Children: LR for the first 2 liters then switch to D5LR.</li> <li>Vascular access: May use IO, IV, &amp;/or central line access. May use IO on burn extremity if only access.</li> <li>Send LR with EMS agency for transport. Many EMS services do not carry LR.</li> </ul>
ml	<b>How much IV fluid was given by pre-hospital EMS.</b>
ml	<b>How much IV fluid was given in ED.</b>
ml	<b>Total amount of fluids given, including pre-hospital EMS &amp; in ED.</b>
Yes / No	<b>Airway secured &amp; Oxygenated</b> ET Tube size: _____ Time __: __ <b>NG or OG</b> if ET tube placed.
Yes / N/A	<b>Chemical burn decontamination:</b> <ul style="list-style-type: none"> <li>Call burn center or poison control prior to decontamination.</li> <li>Brush off excessive powder substances prior to copious irrigation with water.</li> <li>Don't delay transfer trying to determine chemical specific treatment</li> </ul>
Yes / No	<b>Burn Care Instructions</b>
	Face: Consider clear topical antibiotic ointment (Bacitracin) if no allergy. Avoid ointment if around eyes unless you use topical antibiotic ophthalmic ointment.
	All other areas: <ul style="list-style-type: none"> <li>Cleanse burn areas to determine depth and percentage. Often times what is thought to be 2nd degree is actually 1st degree when the smoke/soot is cleaned away. 3rd degree is pretty easy to determine even with soot. Don't spend extensive time cleaning wound prior to transport as the patient will be completely washed head to toe wash on arrival to the burn unit.</li> <li>Cover with dry sheet or drape (sterile not necessary). Avoid dressings to burn, will adhere to wound, causes increased pain with removal and longer removal time on arrival to burn center.</li> <li>Do not apply anything to burn area unless directed by the Burn Center physician.</li> <li>No need to debride thermal wounds prior to application of sheet / drape.</li> </ul>
Yes / No __: __	<b>Foley Insertion:</b> Urine output is key indicator of adequate fluid resuscitation. Foley is essential on all burns 20% or greater. If genitalia burns, place foley ASAP. If unable to identify anatomy, consider super pubic if greater than 3 to 4 IV fluids given, delay in transport, or long transport time.
Temp: _____	<b>Thermal regulation.</b> Keep patient warm: use warm / warming blanket, IV fluid warmer.

## WOUND DOCUMENT FLOWSHEET

Area	≤1 y.o.	1-9 y.o.	10-17 y.o.	≥18 y.o.	Open	Healed
Head	19	13	11	7		
Neck	2	2	2	2		
Ant. Trunk	13	13	13	13		
Post. Trunk	13	13	13	13		
Right Buttock	2.5	2.5	2.5	2.5		
Left Buttock	2.5	2.5	2.5	2.5		
Genitalia	1	1	1	1		
Right Upper Arm	4	4	4	4		
Left Upper Arm	4	4	4	4		
Right Lower Arm	3	3	3	3		
Left Lower Arm	3	3	3	3		
Right Hand	2.5	2.5	2.5	2.5		
Left Hand	2.5	2.5	2.5	2.5		
Right Thigh	5.5	8	8.5	9.5		
Left Thigh	5.5	8	8.5	9.5		
Right Calf	5	5.5	6	7		
Left Calf	5	5.5	6	7		
Right Foot	3.5	3.5	3.5	3.5		
Left Foot	3.5	3.5	3.5	3.5		
Totals						

Admitting Total Body Surface Area \_\_\_\_\_

Today's Weight \_\_\_\_\_ kg



Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Rev. 5/06 MIS: 5/06	<b>MEDICAL RECORD</b>	<b>WOUND DOCUMENT FLOWSHEET</b>
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# **BURN MCI: FLUID RESUSCITATION**

## **I. Burn Resuscitation Protocol**

- A. Document patient's TBSA burn using Lund-Browder diagram (Rule of Nines Diagram). Include only partial and full-thickness burns.
- B. Obtain weight or close estimate.

## **II. First 24 Hours Post Burn**

### **A. TBSA < 20%**

Maintenance IVF only until taking adequate oral intake.

### **B. TBSA > 20% and Weight > 30kg**

1. Calculate estimated fluid needs:

- a) 2-4cc of LR X kg of body weight X %TBSA burned:
  - administer half of calculated amount over the first 8 hours post burn
  - administer half of calculated amount over next 16 hours
- b) If urine output < ½ cc/kg/hour (goal is 30-50 cc/hour):
  - increase LR infusion by 1/3 of the hourly calculated fluid requirement
- c) If urine output > 70 cc/hour:
  - dip urine to exclude glucosuria
  - decrease LR infusion by 1/3 of the hourly calculated fluid requirement

### **C. TBSA > 20% and Weight < 30kg**

1. Calculate estimated fluid needs:

- a) 3-4 cc of LR\*\* X kg of body weight X % TBSA burned
    - administer half of calculated amount over the first 8 hours post burn
    - administer half of calculated amount over next 16 hours
  - b) In addition to burn fluid requirements, also infuse maintenance IVF (calculated total for 24 hours):
    - 100 cc X first 10 kg of body weight
    - 50 cc X next 10 kg of body weight
    - 20 cc X next 10 kg of body weight
  - c) If urine output < 1 cc/kg/hour:
    - increase LR infusion by 1/3 of the hourly calculated fluid requirement
  - d) If urine output >> 1 cc/kg/hour:
    - decrease LR infusion by 1/3 of the hourly calculated fluid requirement
- (\*\*use D5LR if patient < 1 year old)

**D. Place enteral feeding tube as soon as possible for all burns > 20% TBSA.**

**E. Consider Swan-Ganz placement for intubated patients with TBSA > 30%, age > 50 years and/or inhalational injury.**

## **III. Treatment of Low Urine Output**

A. In adult patients with continued low urine output despite increased fluid rates:

1. place Swan-Ganz catheter for monitoring
  - a) if central pressures normal to high with low urine output:
    - start low dose Dobutamine @ 5 mcg/kg/min
    - titrate to effect
  - b) if central pressures are low with low urine output:
    - continue fluid resuscitation at increased rate

## **IV. After 24 Hours Post Burn**

- A. Serum Na<sup>+</sup> and K<sup>+</sup> should be checked at least BID on the second burn day.
- B. Adjust type of fluid by the serum Na<sup>+</sup> level.
- C. After 24 hours of crystalloid, if fluid requirements high, consider 5% albumin infusion (discuss with attending).
- D. Goal is to decrease IVF rate to one half of rate infused over the previous 16 hours.
  1. If patient >30 kg, urine output goal of ½ cc/kg/hour (maximum 50cc/hour)
  2. If patient <30 kg, urine output goal of 1 cc/kg/hour

### Burn Resuscitation Calculation Sheet

**Fluid of Choice:** Adult: Recommend LR. Children: Initially use LR, then switch to D5LR after 2 liters of LR.

\_\_\_\_\_ ml (Adult 2 - 4 ml, Child 3 - 4 ml) x \_\_\_\_\_ kg X \_\_\_\_\_ % TBSA = \_\_\_\_\_ ml (Amount in 1<sup>st</sup> 24 hrs)  
\_\_\_\_\_ ml (Amount in 1<sup>st</sup> 24 hrs) divide 2 = \_\_\_\_\_ ml ( Amount to be given 1<sup>st</sup> 8 hrs)  
\_\_\_\_\_ ml (Amount to be given 1<sup>st</sup> 8 hrs) divide by 8 hrs = \_\_\_\_\_ ml / hour for the first 8 hours

### EXAMPLE

### Burn Fluid Resuscitation ED Calculation Sheet

\_\_\_4\_\_\_ ml (adult 2 - 4 ml) x \_\_\_80\_\_\_ kg X \_\_\_50\_\_\_ % TBSA = \_\_\_16,000\_\_\_ ml (Amount in 1<sup>st</sup> 24 hrs)  
\_\_\_16,000\_\_\_ ml (Amount in 1<sup>st</sup> 24 hrs) divide 2 = \_\_\_8,000\_\_\_ ml ( Amount to be given 1<sup>st</sup> 8 hrs)  
\_\_\_8,000\_\_\_ ml Amount to be given 1<sup>st</sup> 8 hrs) divide by 8 hrs = \_\_\_1,000\_\_\_ ml / hour for the first 8 hours

Time of Burn \_\_\_12:00 \_\_\_\_\_-----placed this on the first page so readily visible to all.

<u>U of M Burn Center,</u>	<u>Spectrum Health Burn Center, Grand Rapids</u>
<p>U of M Transfer Line</p> <ul style="list-style-type: none"><li>• Initiate contact with Burn Center ASAP.</li><li>• Early phone contact with Burn Center physician is encouraged on critical patients, even prior to arrival in ED</li><li>• Burn Center physician can assist in management of critical burn patient(s) and orchestrate a smooth transfer process.</li></ul> <p><b>For Family - Physical Address for Burn Center</b> U of M, Burn Center</p>	<p>Spectrum Health Direct Transfer Line 888-936-0005 or 616-391-4321</p> <ul style="list-style-type: none"><li>• Initiate contact with Burn Center ASAP.</li><li>• Early phone contact with Burn Center physician is encouraged on critical patients, even prior to arrival in ED</li><li>• Burn Center physician can assist in management of critical burn patient(s) and orchestrate a smooth transfer process.</li></ul> <p><b>For Family - Physical Address for Burn Center</b> Spectrum Health, Butterworth, 100 Michigan Street, Floor: 6 South tower, Grand Rapids, MI (616) 391-9250</p>

### Reference Material – includes transfer guidelines

Transfer criteria reference page: <http://chemm.nlm.nih.gov/burns.htm#transfer>