Yukon-Kuskokwim HEALTH CORPORATION

Clinical Guideline

Burns (Adult and Pediatric)

Severe Criteria

- Circumferential burns
- Burns across joints
- Burns of face, neck, or groin
- Electrical/chemical burns
- Inhalation injuries/respiratory distress
- Trauma (refer to ATLS)
- Any full-thickness (3rd degree) burns

Disposition Considerations/Criteria

Village: *wound care by health aides over RMT, consider PT by telehealth.*
- Pain controlled on PO regimen.
- No sign of wound infection.
- Unlikely to require further debridement.
- Patient/caregiver/health aide able to perform dressing changes.

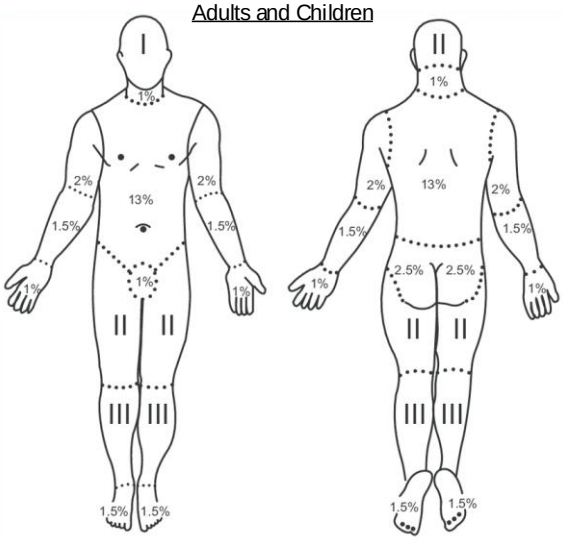
Outpatient (ED/Outpatient Clinic/PT): *daily follow-up for wound management and ROM exercises.*
- Wound infection improving on PO antibiotic regimen.
- Debridement not more than once/day.
- Dressing changes not more than once/day.
- Need for PT assessment not more than twice/week.

If discharging, place referral to PT wound care if indicated.

Inpatient YKHC:
- Pain uncontrolled on oral medications.
- Dressing changes more than once/day.
- Wound infection requiring IV antibiotics.
- Nonambulatory (including wounds on both feet).

Inpatient ANMC:
- Critical illness.
- Wound requiring operative debridement or grafting.
- Surgeon recommends higher level of care.
- Child with severe criteria.
- If expected wound care exceeds currently available resources at YKHC.

Lund and Browder Chart to Estimate TBSA in Adults and Children



Age	0	1	5	10	15	Adult
Front or back half	(%)	(%)	(%)	(%)	(%)	(%)
I (Head)	9½	8½	6½	5½	4½	3½
II (Thigh)	2¾	3¼	4	4¼	4½	4¾
III (Leg)	2½	2½	2¾	3	3¼	3½

Patient presents with a burn injury.

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Assess VS, circulation, airway, and breathing.

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Are there signs of impending airway compromise? See Box. — Yes → Consider early endotracheal intubation.

No ↓

Assess total body surface area (TBSA) affected by partial or full thickness burns.

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Adult TBSA > 10%? Child TBSA > 5%? Severe criteria? See Box. — Yes →
- IV access
- Analgesia
- Labs: CBC with diff, CMP, UDS, EtOH, CK, coags.
- If inhalation injury, add ABG, carboxyhemoglobin.
- If TBSA >15%, give IVF per Consensus Formula in box.

No ↓

Wound Care
- Debridement as appropriate. Debride clear blisters >2 cm. Consider sedation.
- Cleanse in dilute chlorhexidine solution.
- Apply bacitracin or mupirocin and cover with Adaptic.
- Wrap with dry gauze.
- Elevate/compress affected extremities.

Consult General Surgeon.

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Determine disposition. See Box.

Signs of Impending Airway Compromise

- History of enclosed space fire (including house fire)
- Burn injury or soot in oropharynx
- Stridor or wheezing
- Circumferential burn of neck

Village Management

For any burn that warrants travel to Bethel, instruct health aides to apply bacitracin and NOT silvadene to avoid painful cleaning of wounds in Bethel.

Findings Concerning for Abuse

- Delay in seeking care
- Variations in history
- Injuries inconsistent with history
- Immersion injuries
- Uniform depth
- Well-demarcated burn margins
- Geometric pattern/object imprint

If any concern for abuse, send a message to Child Abuse on Call by Tiger Connect.

Fluid management

There is no longer clear consensus on initial empiric fluid resuscitation. The Modified Brooke formula is now more commonly referenced over Parkland (June 2025).

Modified Brooke formula:

(weight in kg) x 2 mL x %TBSA = total fluid to be given over 24 hours

Do not convert %TBSA to a decimal. For example, 15% TBSA would be 15. Do not include superficial burns in % TBSA.

Give half in first eight hours from time of burn, other half over next sixteen hours.

If delayed presentation, begin at initial calculated 8 hour rate.

For all patients:

Consult surgery early regarding fluid resuscitation plan.

Titrate fluids to urine output. A reasonable goal is 0.5-1 mL/kg/hour.

Use LR used for adults unless mitigating circumstances.

For pediatric patients <30 kg, add D5.

Classification of Burns by Depth

Burns evolve over time; initial TBSA and depth classification can change and often the difference between deep partial thickness and full thickness can only be determined operatively.

- Superficial (1st degree): epidermis only, dry, red, blanches with pressure, no blisters, painful.
- Superficial partial-thickness (2nd degree): epidermis and part of dermis, blisters, moist, red, weeping, blanches with pressure, painful.
- Deep partial-thickness (2nd degree): epidermis and deep dermis, blisters, wet or waxy dry, patchy white to red, does not blanch, pressure sensation only.
- Full-thickness (3rd degree): epidermis and entire dermis, waxy white to leathery gray to charred/ black, dry and inelastic, does not blanch, sensation to deep pressure only, may be defined as 4th degree with extension into underlying fascia, muscle, or bone.

This guideline is designed for the general use of most patients but may need to be adapted to meet the special needs of a specific patient as determined by the medical practitioner.
Approved by Clinical Guideline Committee 9/29/25. Click here to see the supplemental resources for this guideline.
If comments about this guideline, please contact Travis_Nelson@ykhc.org.