Guideline: Pediatric Burn Admission, Transfer & Discharge Criteria

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Content Experts
Anne Wagner, MD Elizabeth Dale Slater, MD Ryan Stark, MD Anna-Lesa Sackey, APRN Erica Schoch, RN

Table of Contents

Introduction:

The Burn Center is a regional Burn Center serving the State of Tennessee and the surrounding area (Kentucky, Missouri, Arkansas, Mississippi, Alabama, and North Carolina). The Burn Center consists of adult and pediatric inpatient and outpatient settings that specialize in the emergent, acute and rehabilitative phases of all form of burn injuries (electrical, chemical, friction, contact, scald, etc), frostbite, and SJS/TEN. The Burn Center is designed to accommodate patients requiring all levels of care; it includes designated ICU and stepdown beds as well as outpatient clinic rooms. This policy provides a guideline for pediatric patients being referred to and cared for in the Burn Center at Monroe Carell Jr. Children's Hospital (Monroe Carell), and outlines criteria to enable the Burn Center to prioritize admissions and discharges as well as transfers in and transfers out of the Burn Center.

Policy Details:

I. Referral and Admission Criteria

A. The Burn Center is never closed and burn patients should never be diverted by the Emergency Department or the Transfer Center unless under the direction of the Burn Director.

B. Ultimately, the decision for admission is at the discretion of the burn attending on call. These criteria are intended to provide general guidelines and are not an all-inclusive list.

C. The Burn Center admits patients of all ages with burn injuries, frostbite, and other cutaneous injuries of any size and type. Pediatric patients requiring ICU are admitted to the PICU at Monroe Carell Jr. Children's Hospital (Monroe Carell). Adolescents (age of 16 years and over and equal to or greater than 40kg) may be admitted to the adult or the pediatric hospital under the direction of the on-call burn attending.

D. The American Burn Association's (ABA's) published Burn Center Referral Criteria provides general guidance in the types of patient referrals to expect. These are guidelines and do not exclude patients that fall outside the criteria, nor do they represent mandatory admission criteria. These criteria are included in the appendix below.

E. Injuries/skin disorders admitted to the Burn Center include, but are not limited to:

1. All types of burn injuries (including but not limited to scald, flame, flash, contact, electrical, chemical, friction, and radiation burns)
2. Smoke inhalation
3. Cold injuries (including but not limited to frostbite injuries)
4. Soft tissue degloving injuries
5. Friction injuries (including but not limited to road rash)
6. SJS/TENS

F. Any patient suffering from burn injuries extensive enough to require inpatient care should be admitted to the Burn Center. Patients with concomitant burn and trauma injuries will have disposition decided on a patient-by-patient basis.

II. Referral and Admission Process

A. General:

1. An attending burn surgeon is available for consultation and triage 24 hours per day. The Burn Surgeon Attending should determine whether the patient can be managed in their current setting, as an outpatient, or whether the patient requires inpatient admission to the Burn Center, and to what status.

2. If the attending burn surgeon determines that the patient may be cared for in the outpatient setting, they should be given instructions for care and the Vanderbilt Transfer Center will arrange a Burn Clinic appointment.
3. The Burn Service should remain the primary service on all burn patients when possible. When this is not possible, the burn service will follow closely to manage the care the patient requires.

B. Admission from Other Facilities:
1. The Burn Surgeon Attending should be notified of all patients from outside referring facilities through the Vanderbilt Transfer Center.
2. The Vanderbilt Transfer Center should ask the referring provider to send encrypted photos which will be sent to the Burn Surgeon Attending through their Vanderbilt e-mail account. However, this is **not necessary if it will slow down or inhibit patient care in any way**.
3. The Burn Center should ask if the referring facility has a copy of the Vanderbilt Burn Center Transfer Checklist (see below) to be documented and sent with the patient upon transfer.
    a. If the referring facility does not have the checklist, the Vanderbilt Transfer Center can fax the Transfer Checklist to the referring facility to be documented and sent with the patient upon transfer.

C. Admission from the ED:
1. The Burn team should be notified according to the Burn Alert Protocol (see below).
    a. The patient should be evaluated by a Burn Provider to determine the appropriate level of treatment.
        i. Patients with burn injuries that do not require admission to the hospital may be cared for by the Emergency Department Physician and Nursing team in consultation with the Burn team.

D. Admission or Sedation from the Burn Clinic:
1. A decision to admit a patient from the clinic should be made in collaboration with the Burn Clinic Provider and the Burn Surgeon Attending on call. The on-call Burn Resident or Pediatric Burn APP will complete the admission orders, history & physical and the Lund and Browder.
    a. Patients requiring admission without same-day sedation:
        i. Burn Clinic Provider places the order for Request for Future Admission as urgent or emergent, then contacts the Monroe Carell Admitting department at (615-936-4334).
        ii. Once notified of bed availability, patients must report to Monroe Carell Admitting within 2 hours.
    b. Patients requiring admission with same-day sedation:
        i. Clinic APP places a consult for the Pediatric Sedation Team via phone at 615-936-3358. If the Sedation Team accepts the patient for same-day sedation, the patient to reports to Monroe Carell pre-operative unit at the time provided by the Sedation Team.

ii. If the patient is ineligible for same-day sedation by the Sedation Team, the patient reports to Monroe Carell Emergency Department for the sedated debridement and admission.

c. Patients requiring same-day sedation without admission:

i. Clinic APP to place consult for Pediatric Sedation Team via phone at 615-936-3358. If the Sedation Team accepts the patient for same-day sedation, the patient reports to Monroe Carell pre-operative unit at the time provided by the Sedation Team and discharges following the procedure.

ii. If the patient is ineligible for same-day sedation by the Sedation Team, the patient reports to the Monroe Carell Emergency Department for sedated debridement and discharges following procedure.

E. PICU Admissions:

- All pediatric patients <16 years old with burns ≥15% TBSA
- All intubated patients
- Any patient requiring close monitoring of extremity perfusion (e.g. fullthickness circumferential burns requiring q1hr neurovascular exams)
- Any patient requiring ICU level for respiratory monitoring, including patients with concerns for smoke inhalation.
- Any hemodynamically abnormal patient (shock, cardiacarrythmias)
- High-voltage Electrical Injury
- Other patients at the discretion of the burn surgeon or intensivist
- All patients requiring a formal resuscitation

F. Pediatric Acute Care Admission

- Any patient with:
  - Pediatric patients <16 years old with burns <15% TBSA requiring admission
  - Infected burns
  - Concern for non-accidental trauma
  - Uncontrolled pain
- Patients who lost their home due to fire of those with no safe place to discharge to
- Patients requiring initiation of rehabilitative therapy, or those unableto perform stretches
- Patients with medical comorbidities that will significantly alter theirability to recover from a burn injury
- Social stressors related to their injury that require additionalpsychiatric or social work support
- Other patients at the burn surgeon's discretion

III. Hospital Discharge Criteria:

Patients need to meet the following 5 criteria to transition to outpatient management through the burn center:

1. Pain controlled with oral medications
2. Wound care can be performed by the patient or a designee to the satisfactionof the burn center staff (providers and nursing)

3. Burn therapy (PT and/or OT) has recommended discharge to home and patient has demonstrated ability to perform their home exercise program
4. Patient has a safe place to discharge to
5. Patient is maintaining adequate fluid and nutrition intake

- All discharging patients should have a discharge appointment set up in the Burn Clinic.
- Discharge orders should be signed by 9:30 am for all discharges whenever possible.
- Patient discharges should occur prior to 11:00 am whenever possible. Possible discharge dates should be discussed daily on MD/RN rounds to assist with communication to the hydro team for appropriate wound care teaching.
- **Caution should be used if considering discharge in a patient who has been admitted for <24 hours, these patients have a higher readmission rate on average.**

IV. Internal Transfer Criteria:

Decisions to internally transfer to a lower acuity of care are ultimately up to the attendings managing the patient, but the following criteria may inform those decisions.

A. Criteria for transfer from PICU to Pediatric Acute Care:

Pediatric patients without ongoing critical care needs, who still require inpatient care, are reasonable to transfer to pediatric acute care for ongoing burn management. However, pediatric patients with the following limitation may need to remain in the PICU

- Any patient with a high risk of deterioration from a physiologic standpoint should remainin the PICU until that risk has been resolved
- Any patient meeting rapid response criteria
- Patients with ≥15% TBSA burns that have not completed their initial early excision should remain in the PICU until those operations have been completed

Prior to transfer, pediatric patients must undergo *at least* one successful round complete wound care without requiring conscious sedation. Pediatric conscious sedation is only available through the Pediatric Sedation Team Monday through Friday and early transition to the acute care floor may result in inadequate pain control and anxiolysis.

V. Appendix

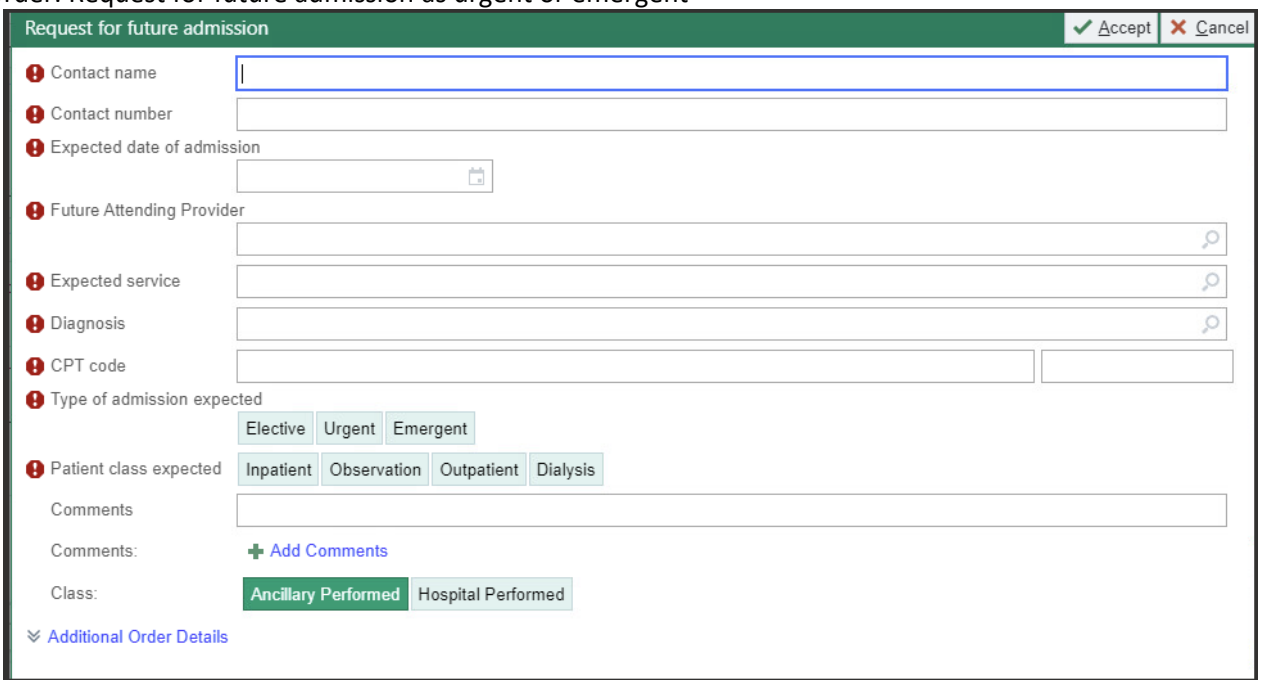
A. Pediatric Burn Admission, Transfer, & Discharge Criteria Clinical Practice Guideline
[CPG] Pediatric Burn Admission, Transfer, Discharge.pdf

B. Pediatric Burn Admission or Sedation from Clinic Clinical Practice Guideline
[CPG] Pediatric Burn Admission or Sedation from Clinic.pdf

C. Pediatric Burn Mepilex Takedown in Clinic Clinical Practice Guideline
[CPG] Pediatric Burn Mepilex Takedown in Clinic.pdf

D. Steps to place admission order from clinic

1. Order: Request for future admission as urgent or emergent



2. Contact Monroe Carell Admitting: 615-936-4334
   - Notify Admitting that the order was placed, admitting will tell clinician if bed will be available and timeframe
   - Admitting will contact the clinician number listed in the order when a bed is available
     - Patient has 2 hours to be at Monroe Carell Admitting Department (1st floor) from time of the notification
     - Admitting checks patient in and brings the patient to their room

Caveat: if no beds are available admitting will notify clinician that patient needs to go to the Monroe Carell Emergency Department

E. Pediatric Burn Alert Criteria

Vanderbilt Peds Emergency Medicine Burn Alert Criteria

Burn Alert Level I

- ≥ 15% total body surface area (TBSA) full/partial thickness burns without concurrent trauma
- Any intubated burn patient or burn patient with unstable/ unsecure airway
- High voltage electrical (> household voltage 240) or lightening injuries
- Chemical burns that involve >15% TBSA (Hydrofluoric acid injuries > 1% TBSA)
- Extremities: frozen or thawed within the last 24 hours, and body temp: moderate (core body temp 30-34°C/86-93°F) to severe (core body temp <30°C/<86°F) hypothermia

Burn Alert Level II

- 5-14% total body surface area (TBSA) of partial and/or full thickness (2nd and 3rd degree) burns
- Non-intubated inhalation injuries, including chemical inhalation
- Low voltage electrical (</= household voltage 240) with burn injury or neuropathy
- Chemical burns <15% TBSA (Hydrofluoric acid injuries < 1% TBSA)
- Extremities: frozen or thawed within the last 24 hours, and body temp: mild hypothermia (core body temp 34-35.9°C)

All leveled burns should be 2nd or 3rd degree (partial or full thickness). First degree burns should not be leveled.

Burn Consult

- Any burn injury not meeting burn alert criteria
- Frostbite injury thawed extremities >24 hours
- Soft tissue disorders or injuries such as TENs, SJS, soft tissue degloving, and crush injury

SPECIAL CONSIDERATIONS

- Emergency Medicine, Trauma or Burn Attendings ONLY may up/downgrade patients
- Residents, Fellows, and ED staff DO NOT level patients
- LightFlight flight crew will level their patients
- Unless requested by an EM Attending, the Communications Center personnel will assign a level

F. Vanderbilt Transfer Checklist

Vanderbilt Transfer Checklist:

Date:

Referring Facility:

Referring Physician

Telephone:

Patient information:

Name:

DOB/Age:

Mechanism of Injury:

Weight/Height:

Allergies:

Current medications:

Past Medical/Surgical History:

Next of Kin contact information:

Date/Time of Injury:

Time of Arrival:

Vital signs prior to transfer:

BP: Pulse: O2 saturation: Body Temp:

Total Fluids prior to transfer:

Urine output prior to transfer:

Tetanus Given:

Pain/Sedation Medications given: