

Abscess/Cellulitis Care Map

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How to Use Reference Icons

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Care Map Symbols

Links to more information or returns to a previous page.

Start of a Care Map Segment

Decision Point

Stop and Evaluate

Care Map Step
Blue underlined text is a hyperlink

Progression of care – Patient Improving



Source Reference



Education Module



Hospital Policy



Hospital Reference



Provider Information



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Suggested Inclusion Criteria for Abscess/Cellulitis

- Suspected skin/ soft tissue infection of children > 8 weeks of age.



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Potential Reasons to Avoid Abscess/Cellulitis Care Map

1. Presumed necrotizing fasciitis
2. Presumed deep tissue infection/bone or joint
3. Immunodeficiency
4. Orbital/Periorbital Cellulitis
5. Dental/Facial abscess or cellulitis
6. Post op wound or surgical site infections
7. Perianal Abscesses



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Emergency Department Care: Soft Tissue Abscess/Cellulitis



Diagnostic testing & therapies not routinely recommended:
 Blood Culture
 CBC
 C-rp
 ESR

Discharge Home
Family education complete

Triage

- Nurse performs initial assessment and assigns ESI* level.

Suspected soft tissue abscess/cellulitis
Make NPO

Minimize pain and maximize comfort throughout care pathway

Not drainable

Potentially drainable
Nurse Standing Order:
 EMLA or LMX

MD evaluation
 Outline lesion with marker

No

Drainable

Yes

Incision and Drainage

Discharge Criteria:
Low Risk Criteria
 Follow up in 48 hours
 Standard Discharge instruction
 Appropriate Antibiotics for 5-7 days

Discharge if meets criteria otherwise

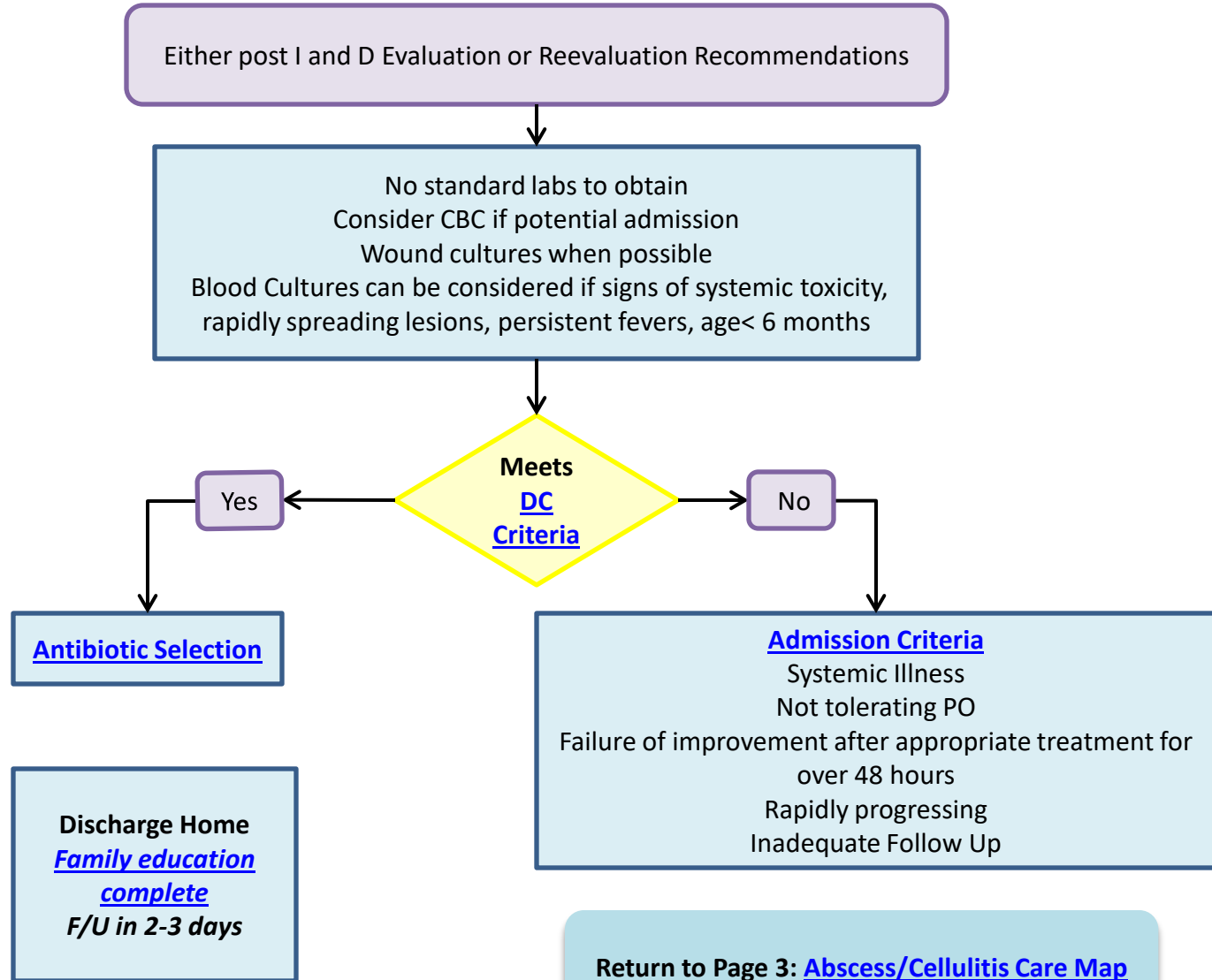
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Emergency Department Care: Disposition



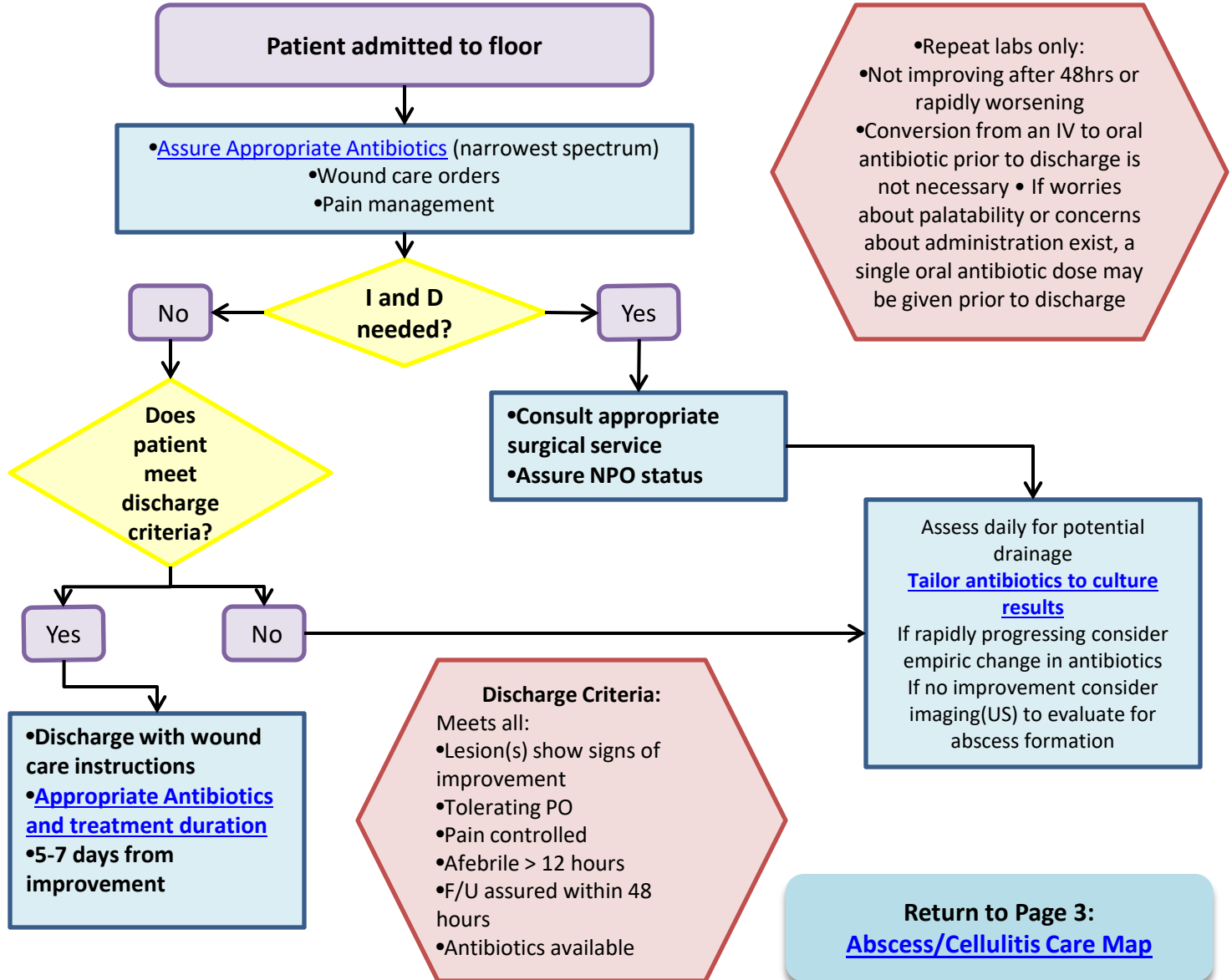
Diagnostic testing
& therapies not
routinely
recommended:
Blood Culture
CBC
C-rp
ESR



Inpatient Care



Diagnostic testing & therapies not routinely recommended:
 Blood Culture
 CBC
 C-rp
 ESR



•Repeat labs only:
 •Not improving after 48hrs or rapidly worsening
 •Conversion from an IV to oral antibiotic prior to discharge is not necessary • If worries about palatability or concerns about administration exist, a single oral antibiotic dose may be given prior to discharge

Discharge Criteria:
 Meets all:
 •Lesion(s) show signs of improvement
 •Tolerating PO
 •Pain controlled
 •Afebrile > 12 hours
 •F/U assured within 48 hours
 •Antibiotics available

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Wound Care Instructions (In hospital)

- Prior to I & D
 - Warm compresses should be applied for 20minutes q4-6 hours while the patient is awake.
 - If the area is draining the abscess should be covered with dry sterile gauze per wound care procedures.
 - If no previous culture has been obtained and the abscess begins draining, a culture should be collected per lab procedure and the MD should be called for an order.
- Post I&D with packing
 - Change the top dressing BID and when visibly soiled.
 - The patient may shower or bathe with the packing in place. Remove the gauze prior to bathing and place a new clean dressing over the site after bathing.
- Post I&D without packing
 - Bath patient TID for 2 days.
 - During each bath, the caregiver (nurse or family member) should wash the area of incision with soap and water/ The incision site should also be gentle pulled apart so that the wound can continue to drain.
 - After the bath the wound should be covered with a clean dry dressing.
- Wound care discharge instructions should be given to all patients that have had Incision and Drainage.

Discharge instructions

- No packing
 - Patient to bathe/ apply warm soaks three times a day for two days.
 - During each bath caregiver should wash the incision area with soap and water. The incision site should be gently pulled apart. This will assist with wound drainage.
 - Apply antibiotic ointment(optional) and a clean dry dressing.
- Packing in place
 - Change top dressing at least twice a day or more frequently if soiled.
 - Patient may shower or bathe with the packing in place. Remove gauze dressing prior to bathing. After bathing, apply new gauze.
 - Remove packing on the day after discharge. This is easiest while patient is bathing.
- Advice to parents for prevention of recurrent abscesses:
 - Apply warm compresses as soon as a lesion is noted.
 - If a head is noted, to cleanse the lesion with soap and water, to “pop” the lesion with a sterilized needle and to squeeze the lesion until only blood is noted.
 - Nasal Bactroban is *not* recommended.
 - Hibicleans washes are recommended every 2-3 days for patients/families with recurrent abscesses for two weeks) .
 - Showers are recommended instead of baths.
 - Apply lotion daily to skin.

ED Nursing Standing orders

Date/Time	Order
	<ol style="list-style-type: none"> 1. For patients with severe pain (pain scale at least N7, F8, NV2) consider ESI Level 2 and move to treatment area for provider to evaluate pain.
	<ol style="list-style-type: none"> 2. For all patients administer Ibuprofen 10mg per kg of body weight orally unless contraindicated as below: <ol style="list-style-type: none"> a. Max dose 600mg b. Exclusions: <ul style="list-style-type: none"> • NO Hem/Onc patient will receive ibuprofen without consultation with Hem/Onc physicians • Patients presenting with abdominal pain • Allergy to ibuprofen or any component of medication (e.g. flavoring) • NPO status • Anticipated or recent surgery (within past 2 weeks) • Recent head injury (within past 2 weeks) • Bleeding disorder • Hemorrhage • Gastrointestinal problems • Renal disease
	<ol style="list-style-type: none"> 3. For patients requiring abscess drainage or port access apply topical numbing agent as below: (NOTE: Do not delay port access for EMLA to take effect, apply only to intact skin) <ol style="list-style-type: none"> a. Lidocaine/Prilocaine topical b. May apply 4% Lidocaine topical to site if patient allergic to prilocaine or for patient/family preference

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Incision and drainage

- Often, no drainage is needed for abscesses <1 cm; these patients may be discharged home on antibiotics alone with close PCP follow-up
- Larger abscesses require thorough I&D of purulent material with adequate sedation and analgesia
- Consider surgical consultation for very large or complicated abscesses that may require extensive exploration or prolonged sedation time
- All patients who have had an I&D procedure should have reliable follow-up for re-evaluation with their PCP in 48 hours
- Correct incision and drainage technique is the cornerstone of treating abscesses. If you perform I&D, the following video is a good reminder of proper techniques:

<https://www.nejm.org/doi/full/10.1056/NEJMvcm071319>

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Low Risk Criteria

- Simple abscess
- Adequate I&D if needed
- Age \geq 6 months
- Well-appearing
- No significant comorbidities
- Follow up assured

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Criteria for Inpatient Care (Payor)

Clinical Indications for Admission to Inpatient Care

- Admission is indicated for cellulitis and **1 or more** of the following(1)(2)(3)(4)(5)(6)(7):
 - Age younger than 6 months
 - Immunocompromised or immunosuppressed patient (eg, asplenic, chronic systemic corticosteroid use)(10)
 - Altered mental status that is severe or persistent
 - Hemodynamic instability
 - Suspected necrotizing soft tissue infection (eg, gas in tissue)(11)(12)(13)
 - Bacteremia
 - Failure of outpatient treatment
 - High fever (101.3 degrees F (38.5 degrees C))
 - Orbital cellulitis. See Cellulitis, Orbital or Periorbital Abscess, Pediatric ^{ISC} guideline.
 - Associated surgical procedure (eg, abscess drainage, debridement) not amenable to emergency department, or observation care
 - Cutaneous gangrene(14)
 - Limb-threatening infection
 - Extremity lesion with **1 or more** of the following:
 - Significant lymphadenopathy
 - Thrombophlebitis or lymphangitis
 - WBC count greater than 15,000/mm³ (15 x10⁹/L)
 - Facial lesion with **1 or more** of the following(15):
 - Buccal cellulitis in patient without adequate vaccination against *Hemophilus influenzae* type b
 - Absence of penetrating wound with **1 or more** of the following:
 - Child younger than 3 years
 - WBC count greater than 15,000/mm³ (15 x10⁹/L)
 - Lesion with violaceous hue
 - Periorbital or perineal infection that is severe or progressive
 - Severe pain requiring acute inpatient management
 - Compartment syndrome monitoring(16)
 - Inability to maintain oral hydration (ie, IV fluid support needed)
 - Strict or protective (eg, laminar flow) isolation
 - Urgent debridement or skin grafting
 - Bone or joint debridement
 - Immediate inpatient surgery
 - Other condition, treatment, or monitoring requiring inpatient admission

Note: Not all criteria are applicable for this care map. Admission criteria on care map list the needed documentation requirements for this disease process.

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Failure of outpatient treatment – Definition

Failure of outpatient treatment

- Failure of outpatient treatment as indicated by **1 or more** of the following:
 - Insufficient improvement (or worsening) of signs or symptoms despite adherence to appropriate outpatient regimen of sufficient duration
 - Inability to adequately adhere to appropriate outpatient regimen (eg, vomiting, altered mental status, inadequate outpatient or caregiver support)
 - Inability to tolerate outpatient regimen (eg, severe side effects, allergy)

- Sufficient duration: 48 hours of oral treatment

Antibiotic Selection: antibiogram

	Non-Purulent Cellulitis	Purulent SSTI/abscess	Bite wounds	Duration of treatment
PO choice Recent studies suggest better outcomes with the addition of antibiotics even if drained.	Cephalexin: 20 mg/kg/dose q 8 hrs or 3x/day Max: 1,000 mg/dose	Clindamycin 10 mg/kg/dose q 8 hrs or 3x/day Max: 1800 mg/day PO or max 600 mg/dose OR Consider TMP-SMX as alternative therapy	Amoxicillin/clavulanate	5 days If previous culture information for patient available, tailor antibiotics to past sensitivities.
PO alternatives	If cephalosporin allergic or treatment failure > 48 Clindamycin 10 mg/kg/dose q 8 hrs or 3x/day Max: 1800 mg/day PO or max 600 mg/dose	Doxycycline if age >8 years and prior clindamycin and TMP/SMX resistant MRSA OR presumed clindamycin resistance and sulfa allergy Call ID if linezolid desired	Doxycycline if age >8 years and penicillin allergy Clindamycin AND ciprofloxacin for penicillin allergic patients Call ID for other scenarios	
IV Choice	Cefazolin 20 mg/kg/dose q 8 hrs Max 2 g/dose	Clindamycin IV 13.3 mg/kg/dose every 8 hours Max 900 mg/dose (2700 mg/day)	Ampicillin/sulbactam	5 days from clinical improvement PMD follow-up before completion of antibiotics
IV alternatives (allergy or not improving in 48 hours)	Clindamycin if cephalosporin allergic Consider vancomycin if rapidly progressive lesion; hemodynamic instability; ill-appearing	Vancomycin if presumed clindamycin resistant MRSA; rapidly progressive lesion; hemodynamic instability; ill-appearing; Call ID if linezolid desired	Cefoxitin (transition to clindamycin AND ciprofloxacin at discharge) if penicillin allergic	

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Care map metrics

Metric	AIM	Rationale	Available benchmark and source
Process			
% Utilization of Clindamycin on patients admitted to the hospital	Maintain current level of usage	Antibiotic Stewardship	Historical
% utilization of Vancomycin on patients admitted to the hospital	Maintain current level of usage	Antibiotic Stewardship	Historical
% utilization of blood cultures per patient encounter(ED , OBS, and Inpatient)	Decrease by 10%	Blood cultures are rarely positive and do not routinely add value to care. Risk of false positive blood cultures that may necessitate or increase hospital stays.	Historical
Number of CBC/CRP per patient inpatient/obs encounter	Decrease by 10%	Duration of treatment and additional interventions should be dictated by clinical improvement not lab values .	Historical
Balancing			
Readmission to inpatient or obs status within 7 days of discharge from inpatient or obs stay	To maintain or improve	Changes in management should not lead to increase in readmissions or returns	PHIS: 5.3
Reencounter to ED within 7 days of ED visit	To maintain or improve		PHIS: 6.8
Reencounter to ED after inpatient or obs stay within 7 days	To maintain or improve		
Outcome			
Inpatient/OBS LOS	5% decrease in LOS		PHIS: 1.26
Overall Admission Rate	5% decrease		PHIS: 20.17
Rate of admission to Obs Status Rate of admission to inpatient status	X% Decrease in OBS percentage X% Increase in admission status percentage		

References

- [Hepburn MJ, Dooley DP, Skidmore PJ, Ellis MW, Starnes WF, Hasewinkle WC. Comparison of Short-Course \(5 Days\) and Standard \(10 Days\) Treatment for Uncomplicated Cellulitis. *Arch Intern Med.* 2004;164\(15\):1669–1674. doi:10.1001/archinte.164.15.1669](#)

Physician Disclaimers: Abscess/Cellulitis Care Map

Medical Disclaimer

Medicine is an ever-changing science. As new research and clinical experience broaden our knowledge, changes in treatment and drug therapy are required.

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Contact and Revisions Number

- **For questions concerning this care map, contact: CareMap@etch.com**
- **Last Update: 9/16/19**