

Wound and Skin Management GRG

GRG: PG-WS (ISC GRG)

MCG Health

General Recovery Care

30th Edition

Surgical Admission Case

Management GRG  GRG

Note: An appropriate Optimal Recovery Guideline (ORG) should be identified and used whenever possible. This General Recovery Guideline (GRG) is intended to aid only in situations in which no ORG appears applicable.

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Care Planning - Inpatient Admission and Alternatives

Clinical Indications for Procedure

- Surgery or hospital admission is indicated for **1 or more** of the following:
 - ☐ Surgery or other procedure covered by this guideline is indicated for **1 or more** of the following:
 - ☐ Skin lesion excision or other surgery needed, as indicated by **1 or more** of the following(1)(2):
 - Melanoma(3)
 - Other malignant tumor (eg, basal or squamous cell carcinoma, cutaneous angiosarcoma)(4)(5)

☐ Congenital hemangioma and **1 or more** of the following(2)(6):

- Persistent or severe ulceration
- Hemodynamic instability
- High-output heart failure
- Bleeding or high-risk bleeding potential (eg, due to location)
- Thrombocytopenia
- Persistent atrophic tissue following involution
- Functional impairment (eg, due to size or location)
- Causing pain
- Persistence of lesion (involution not ongoing beyond 1 year of age)

☐ Infantile hemangioma and **1 or more** of the following(7)(8):

- Insufficiently responsive to beta-blocker therapy or beta-blocker therapy contraindicated[A](9)
- Location in high-risk area impairing function (eg, near eyes or nose, perianal)(10)(11)
- Complications (eg, skin ulceration, bleeding, infection, high-output heart failure)(10)
- Involuting hemangioma with residual defect (eg, telangiectasias, fibrofatty tissue)(8)
- Benign lesion that is causing significant functional impairment, disfigurement, pain, pruritus, or bleeding(2)(12)(13)
- Benign tumor with recurrent infection not responsive to nonsurgical therapy
- Severe hidradenitis suppurativa with tracts or abscesses(14)(15)(16)
- Pressure injury closure or other procedure needed (eg, stage 3 or 4 ulcer not healing with conservative management)[B](17)(18)(19)(20)
- Insertion or replacement of device into soft tissue needed (eg, replacement of defibrillator, pacemaker, hernia mesh removal)(21)(22)(23)
- Operative burn care needed (thermal, electrical, chemical, or frostbite)(24)(25)(26)(27)(28)
- Lymphedema refractory to medical management (eg, manual lymphatic drainage, intermittent pneumatic compression) requiring biopsy, debulking, or microsurgical procedure(29)(30)(31)
- ☐ Skin or tissue grafting needed (skin, flap, pedicle, or other tissue transfer graft), as indicated by **1 or more** of the following(32)(33):
 - Large wounds or ulcers(34)
 - Reconstructive surgery(35)(36)(37)
 - Abdominoplasty or panniculectomy needed[C](38)(39)(40)(41)
 - Laser light therapy (eg, for port-wine birthmark)(12)(42)(43)
 - Incision or drainage of skin or subcutaneous tissue (eg, perirectal abscess) needed(44)(45)
 - Wound debridement or complex care needed(32)(46)
 - Soft tissue debridement or exploration needed (eg, bite)(47)(48)
 - Postoperative complex wound care (eg, necrotic surgical wound)(32)(49)(50)(51)
 - Trauma care needed (eg, amputation, compartment syndrome, degloving injury, severe necrosis)(52)(53)
 - Surgical offloading procedure needed(54)
 - Amputation required
- ☐ Hospital admission is needed for appropriate care of the patient because of **1 or more** of the following:
 - Severe pemphigus or other blistering disease (eg, treatment of large body area required, corticosteroid greater than 80 mg/day, immunosuppressive therapy commencement, mucocutaneous involvement)(55)(56)(57)(58)
 - Psoriasis requiring large area (eg, 50% of body surface area) or complex care (eg, anthralin, immunosuppressive agents, or tar) not performable at any other level of care[D](59)(60)(62)(63)
 - Stevens-Johnson syndrome[E](64)(65)(66)(67)
 - Toxic epidermal necrolysis[E](64)(68)(69)(70)

- Drug reaction with eosinophilia and systemic symptoms (DRESS)(71)
- Herpes zoster (eg, disseminated, involving large area, corneal) necessitating treatment (eg, IV acyclovir) that cannot be performed at alternative level of care
- Urticaria too severe for observation care (eg, requires ongoing IV treatments; extended monitoring for anaphylaxis, angioedema, or respiratory compromise)(72)(73)(74)(75)
- Neutrophilic dermatosis (eg, pyoderma gangrenosum, Sweet syndrome) requiring high-dose immunosuppression or wound debridement(76)(77)(78)(79)
- Erythroderma (inflammation and exfoliation affecting 90% or more of body surface area)(80)
- ☐ Venous, arterial, neuropathic, or diabetic skin ulcer requiring inpatient care due to **1 or more** of the following(81)(82)(83)(84)(85):
 - Superimposed infection (eg, abscess, necrotizing fasciitis, gas-producing infection) requiring treatment that cannot be performed at alternative level of care
 - Critical ischemia. See Percutaneous Revascularization, Lower Extremity [ISC](#) or Vascular Disease GRG [GRG](#) guideline as appropriate.
- Other skin disorder not adequately treatable at alternative level of care(78)(86)(87)(88)

Alternatives to Procedure

- Alternatives may include(55)(59)(83):
 - Outpatient care in emergency department, observation care (see General Criteria: Observation Care [ISC](#) guideline as appropriate), rapid treatment site, urgent care center, or medical office
 - Outpatient evaluation and follow-up for injuries, including most abrasions and contusions, nonvenomous bites and stings, and other injuries(47)(89)(90)
 - Incision and drainage of abscess(44)
 - Antibiotics or antivirals(22)(88)(91)
 - Burn wound care for minor burns(24)
 - Nonoperative management of lymphedema (eg, compression garments, elevation, comprehensive lymphedema therapy)(29)
 - Debridement
 - Biopsy or lesion removal(4)
 - Endovenous ablation, compression, and elevation for lower extremity venous ulcers(81)(92)(93)
 - Offloading for diabetic foot ulcers(81)
 - Outpatient revascularization procedures for arterial insufficiency ulcers(81)(94)
 - Medical therapy for peripheral arterial disease(94)
 - Medical therapy for skin diseases (eg, psoriasis, neutrophilic dermatosis, pemphigus)(60)(95)
 - Medical therapy for skin cancers(4)
 - Allergy testing
 - Medical therapy for perirectal fistula
 - Radiation therapy(5)
 - Home care(18)
 - Antibiotics
 - Pressure, infection, spasm, and moisture control for decubitus(18)
 - Wound care
 - Pain management
 - Vacuum-assisted therapy (negative pressure wound therapy)(96)(97)
 - Recovery facility(18)(20)

- Pressure, infection, spasm, and moisture control for decubitus(18)
- Vacuum-assisted therapy (negative pressure wound therapy)(96)(97)
- Nutritional support(98)(99)
- Pain management
- Wound care

Operative Status Criteria

Search by CPT® code for specific procedure Benchmark Length of Stay (BLOS).

Note: The definition of an ambulatory procedure depends on payer-provider contractual agreement or regulatory language (eg, CMS' Two-Midnight Rule). An ambulatory procedure may include one postoperative overnight stay in a facility; therefore, a Benchmark Length of Stay (BLOS) of ambulatory refers to patients discharged the day of or the day after the procedure. Depending on various patient and procedural factors, some patients undergoing a procedure with an ambulatory BLOS require inpatient care (eg, medical necessity for hospital-based care across 2 or more postoperative midnights).

The Ambulatory Surgery Exception Criteria [GRG](#) can help with this determination.

- Ambulatory: Benchmark Length of Stay (BLOS) = A
- Inpatient, as indicated by **1 or more** of the following:
 - Benchmark Length of Stay (BLOS) = 2 or more days postoperative (eg, medical necessity for hospital-based care across 2 or more postoperative midnights)
 - Procedure is usually performed on ambulatory basis, but inpatient stay is needed. See Ambulatory Surgery Exception Criteria [GRG](#).
 - Medicare patient, and specific procedure is on CMS Inpatient Only List

Hospitalization

General Recovery Course

Stage	Level of Care	Clinical Status	Interventions
1	• ICU or intermediate care[F] • Social Determinants of Health Assessment • Discharge planning. See Discharge Planning Tool SR.	• Clinical Indications met[G]	• Inpatient interventions as needed
2	• Floor • Social Determinants of Health Assessment	• No ICU or intermediate care needs	• Inpatient interventions continue • Transition to oral routes

3

- **Activity level acceptable**
- Social Determinants of Health Assessment
- Floor to discharge
- Complete discharge planning
- **Temperature status acceptable**
- **No infection, or status acceptable**
- **Pain and nausea absent or adequately managed**
- **Wound and ulcer problems absent or status acceptable**
- **Burn injury absent or acceptable for next level of care**
- **Compartment syndrome absent**
- **Skin disease absent or acceptable for next level of care**
- **General Discharge Criteria met**
- **Intake acceptable**
- **No inpatient interventions needed**

(19)(24)(29)(32)(44)(64)(72)(83)

Recovery Milestones are indicated in **bold**.

Benchmark Length of Stay (BLOS): Access diagnosis and procedure code-specific BLOS via Search functions.

Discharge Criteria

- Continued inpatient stay is needed until **1 or more** of the following are present:
 - Acceptable patient status for next level of care is achieved.
 - **ALL** of the following are present:
 - ☐ Temperature status acceptable, as indicated by **1 or more** of the following(100)(101)(102):
 - Temperature less than 100.5 degrees F (38.1 degrees C) (oral) and greater than 96.8 degrees F (36 degrees C) (rectal)
 - Temperature as expected for disease process and appropriate for management at next level of care
 - ☐ No infection, or status acceptable, as indicated by **1 or more** of the following(101)(102)(103)(104)(105):
 - No infection present
 - Infection status acceptable for next level of care, as indicated by **ALL** of the following(106):
 - WBC count normal, stable, or declining with treatment
 - Adequate treatment performable at next level of care
 - Organism and sensitivities identified, or adequate clinical response to empiric therapy
 - Repeat cultures negative or not needed
 - ☐ Pain and nausea absent or adequately managed, as indicated by **1 or more** of the following(107)(108)(109)(110)(111):
 - No pain or nausea
 - Minimal discomfort on oral medications
 - Pain and nausea managed on regimen performable at next level of care
 - ☐ Wound and ulcer problems absent or status acceptable, as indicated by **1 or more** of the following(24)(32)(82)(112)(113)(114)(115)(116)(117):
 - No wound or ulcer
 - Status acceptable, as indicated by **ALL** of the following:
 - Wound redness, drainage, swelling, and tenderness absent or diminished
 - Purulence and tissue breakdown absent or diminished

- Fistulae or undermining absent or treated
- No new wound dehiscence or hematoma
- Tissue necrosis absent or treatment plan appropriate for next level of care
- Some evidence of wound healing
- Compartment syndrome absent
- ☐ Activity level acceptable, as indicated by **1 or more** of the following:
 - Patient ambulatory and can perform ADL as appropriate for age and development
 - Activity at baseline
 - Activity level acceptable for next level of care
- ☐ Intake acceptable, as indicated by **1 or more** of the following(118):
 - Oral hydration, medications, and diet
 - Enteral hydration, medications, and diet
 - Administration routes performable at next level of care
- ☐ No inpatient interventions needed; examples include:
 - Vital signs, neurologic signs, or vascular checks more often than feasible at next level of care
 - Cardiac or respiratory monitoring
 - IV fluid to replace significant ongoing losses
 - Monitoring need for transfusion due to ongoing blood loss
 - Further burn or skin repair surgery planned in next 24 hours
 - Tissue monitoring for compartment syndrome
 - Procedure or care needed not appropriate for next level of care
- ☐ General Discharge Criteria [GRG](#) met or Pediatric General Discharge Criteria [GRG](#) met (if either is relevant or necessary for patient's condition)

Case Management

See Surgical Admission Case Management GRG [GRG](#) for further information.

Discharge Destination

- Post-hospital levels of admission may include:
 - Home.
 - Home healthcare. See Surgical Admission Home Care GRG [HC](#) or Geriatric Admission Home Care GRG [HC](#) for further information.
 - Recovery facility care. See Surgical Admission Recovery Facility Care GRG [RFC](#) or Geriatric Admission Recovery Facility Care GRG [RFC](#) for further information.
 - Inpatient rehabilitation facility. See Inpatient Rehabilitation Facility (IRF) Admission Recovery Facility Care GRG [RFC](#) for further information.
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Evidence Summary

Criteria

The evidence for the clinical indications found in this guideline includes 63 published peer reviewed articles, 11 specialty society or other evidence-based guidelines, 2 Cochrane systematic reviews, and 9 book sections.

Rationale

Use of this MCG care guideline helps the clinician identify, for a given procedure, which patient-specific factors and clinical conditions are appropriate for that procedure. The evidence-based clinical criteria assist the clinician in the decision to appropriately perform a procedure, evaluating whether the potential benefits of a procedure outweigh the potential risks. For Medicare enrollees, surgical MCG care guidelines also identify which procedures CMS has designated as inpatient only.

Use of these evidence-based clinical criteria to support decision making around the need for a given procedure is of benefit to the patient, as all procedures come with inherent risk that must be balanced by anticipated clinical benefit. Utilizing evidence-based clinical criteria enables a more accurate and patient-specific decision-making process. In addition, the use of evidence-based guidelines can help reduce unwarranted variation in care, such as divergent clinical thresholds to perform a procedure for clinically similar patients that vary across geographic regions, between facilities, and among individual clinicians.

Related CMS Coverage Guidance

This guideline supplements but does not replace, modify, or supersede existing Medicare regulations or applicable National Coverage Determinations (NCDs) or Local Coverage Determinations (LCDs).

Code of Federal Regulations (CFR): 42 CFR 412.3(119); 42 CFR 419.22(120); 42 CFR 422.101(121)

Internet-Only Manual (IOM) Citations: CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 1 - Inpatient Hospital Services Covered Under Part A(122); CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 6 - Hospital Services Covered Under Part B(123); CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 15 - Covered Medical and Other Health Services(124); CMS IOM Publication 100-08, Medicare Program Integrity Manual, Chapter 6, Section 6.5 - Medical Review of Inpatient Hospital Claims for Part A Payment(125)

Medicare Coverage Determinations: Medicare Coverage Database(126)

References

1. McMasters KM, Tyler DS, Egger ME. Melanoma and cutaneous malignancies. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL, editors. Sabiston Textbook of Surgery. 21st ed. Elsevier; 2022:705-733. [Context Link 1]
2. Atherton K, Hinen H. Vascular anomalies: other vascular tumors. Dermatologic Clinics 2022;40(4):401-423. DOI: 10.1016/j.det.2022.06.011. [Context Link 1, 2, 3] View abstract...
3. Swetter SM, et al. Melanoma: Cutaneous. NCCN Clinical Practice Guidelines in Oncology [Internet] National Comprehensive Cancer Network (NCCN). v. 2.2025; 2025 Jan 28 Accessed at: <https://www.nccn.org/>. [accessed 2025 Jul 10] [Context Link 1]
4. Bordeaux J, et al. Basal Cell Skin Cancer. NCCN Clinical Practice Guidelines in Oncology [Internet] National Comprehensive Cancer Network (NCCN). v. 2.2025; 2025 Feb 07 Accessed at: https://www.nccn.org/professionals/physician_gls/f_guidelines.asp. [accessed 2025 Feb 18] [Context Link 1, 2, 3]
5. Rutland CD, Bean GR, Charville GW. Contemporary diagnostic approach to atypical vascular lesion and angiosarcoma. Seminars in Diagnostic Pathology 2023;40(4):284-294. DOI: 10.1053/j.semdp.2023.04.017. [Context Link 1, 2] View abstract...
6. Olsen GM, Nackers A, Drolet BA. Infantile and congenital hemangiomas. Seminars in Pediatric Surgery 2020;29(5):Online. DOI: 10.1016/j.sempedsurg.2020.150969. [Context Link 1] View abstract...

7. Sebaratnam DF, Rodriguez Bandera AL, Wong LF, Wargon O. Infantile hemangioma. part 2: management. *Journal of the American Academy of Dermatology* 2021;85(6):1395-1404. DOI: 10.1016/j.jaad.2021.08.020. [Context Link 1] View abstract...
8. Krowchuk DP, et al. Clinical practice guideline for the management of infantile hemangiomas. *Pediatrics* 2019;143(1):e20183475. DOI: 10.1542/peds.2018-3475. (Reaffirmed 2025 Jun) [Context Link 1, 2, 3] View abstract...
9. Coulie J, et al. Has propranolol eradicated the need for surgery in the management of infantile hemangioma? *Plastic and Reconstructive Surgery* 2024;Online. DOI: 10.1097/PRS.0000000000011532. [Context Link 1] View abstract...
10. Arnold JD, et al. Characteristics and complications of anogenital infantile hemangiomas: A multicenter retrospective analysis. *Journal of the American Academy of Dermatology* 2023;89(5):1015-1021. DOI: 10.1016/j.jaad.2023.06.049. [Context Link 1, 2] View abstract...
11. Bradley FE, et al. A retrospective multicenter cohort study of differences in clinical characteristics of Infantile Hemangiomas in preterm and term infants: Prematurity increases risk of permanent cutaneous sequelae. *Journal of the American Academy of Dermatology* 2025;92(3):546-553. DOI: 10.1016/j.jaad.2024.09.066. [Context Link 1] View abstract...
12. Bajaj S, Tao J, Hashemi DA, Geronemus RG. Weekly pulsed dye laser treatments for port-wine birthmarks in infants. *JAMA Dermatology* 2024;160(6):606-611. DOI: 10.1001/jamadermatol.2024.0293. [Context Link 1, 2] View abstract...
13. Richey P, et al. Noninvasive treatment of cutaneous neurofibromas (cNFs): Results of a randomized prospective, direct comparison of four methods. *Journal of the American Academy of Dermatology* 2024;90(4):767-774. DOI: 10.1016/j.jaad.2023.11.058. [Context Link 1] View abstract...
14. Shukla R, et al. Surgical treatment in Hidradenitis suppurativa. *Journal of Clinical Medicine* 2022;11(9):2311. DOI: 10.3390/jcm11092311. [Context Link 1] View abstract...
15. Dagenet CB, Lee KH, Sayed C, Hsiao JL, Shi VY. Comprehensive and updated algorithm of hidradenitis suppurativa management from the experts. *American Journal of Clinical Dermatology* 2025;26(4):487-497. DOI: 10.1007/s40257-025-00940-0. [Context Link 1] View abstract...
16. Sabat R, et al. Hidradenitis suppurativa. *Lancet* 2025;405(10476):420-438. DOI: 10.1016/S0140-6736(24)02475-9. [Context Link 1] View abstract...
17. Mervis JS, Phillips TJ. Pressure ulcers: prevention and management. *Journal of the American Academy of Dermatology* 2019;81(4):893-902. DOI: 10.1016/j.jaad.2018.12.068. [Context Link 1, 2] View abstract...
18. Pressure Ulcers: Prevention and Management of Pressure Ulcers. NICE Clinical Guidance CG179 [Internet] National Institute for Health and Care Excellence. 2014 Apr (NICE reviewed 2018) Accessed at: <https://www.nice.org.uk/guidance/>. [accessed 2025 Feb 04] [Context Link 1, 2, 3, 4, 5, 6] View abstract...
19. Headlam J, Illsley A. Pressure ulcers: an overview. *British Journal of Hospital Medicine* 2020;81(12):1-9. DOI: 10.12968/hmed.2020.0074. [Context Link 1, 2, 3] View abstract...
20. Qaseem A, Humphrey LL, Forciea MA, Starkey M, Denberg TD, Clinical Guidelines Committee of the American College of Physicians. Treatment of pressure ulcers: a clinical practice guideline from the American College of Physicians. *Annals of Internal Medicine* 2015;162(5):370-379. DOI: 10.7326/M14-1568. (Reaffirmed 2025 Jun) [Context Link 1, 2] View abstract...
21. Chung MK, Daubert JP. Pacemakers and implantable cardioverter-defibrillators. In: Libby P, Bonow RO, Mann DL, Tomaselli GF, Bhatt DL, Solomon SD, editors. *Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine*. 12th ed. Elsevier; 2022:1321-1348. [Context Link 1]
22. Goel V, et al. Outcomes associated with infection of chronic pain spinal implantable electronic devices: insights from a nationwide inpatient sample study. *Neuromodulation* 2021;24(1):126-134. DOI: 10.1111/ner.13263. [Context Link 1, 2] View abstract...
23. Sartelli M, et al. WSES/GAIS/WSIS/SIS-E/AAST global clinical pathways for patients with skin and soft tissue infections. *World Journal of Emergency Surgery* 2022;17(1):Online. DOI: 10.1186/s13017-022-00406-2. [Context Link 1] View abstract...
24. Wolf SE. Burns. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL, editors. *Sabiston Textbook of Surgery*. 21st ed. Elsevier; 2022:484-505. [Context Link 1, 2, 3, 4]
25. Rybarczyk MM, Kivlehan SM. Thermal injuries. In: Walls RM, editor. *Rosen's Emergency Medicine: Concepts and Clinical Practice*. 10th ed. Elsevier; 2023:709-717.e3. [Context Link 1]
26. Sheridan RL, Gorman JM, Walker TG. Diagnosis and treatment of frostbite. *New England Journal of Medicine* 2022;386(23):2213-2220. DOI: 10.1056/NEJMra1800868. [Context Link 1] View abstract...
27. Davis BN, Xu H, Gottlieb LJ, Vrouwe SQ. Acute burn care. *Plastic and Reconstructive Surgery* 2024;153(4):804e-823e. DOI: 10.1097/PRS.0000000000011182. [Context Link 1] View abstract...

28. Haxho F, Lytvyn Y, Shelley AJ, Ortega A, Melin M, Alavi A. Wound Care - Part II: Tissue-engineered skin substitutes & other advanced wound therapies. *Journal of the American Academy of Dermatology* 2025;DOI: 10.1016/j.jaad.2025.06.045. [Context Link 1] View abstract...
29. Executive Committee of the International Society of Lymphology. The Diagnosis and Treatment of Peripheral Lymphedema: 2023 Consensus Document of The International Society of Lymphology. *Lymphology* 2023;56(4):133-151. (Reaffirmed 2025 Jul 07) [Context Link 1, 2, 3] View abstract...
30. Chang DW, et al. Surgical treatment of lymphedema: a systematic review and meta-analysis of controlled trials. results of a consensus conference. *Plastic and Reconstructive Surgery* 2021;147(4):975-993. DOI: 10.1097/PRS.0000000000007783. [Context Link 1] View abstract...
31. Garza RM, Wong D, Chang DW. Optimizing outcomes in lymphedema reconstruction. *Plastic and Reconstructive Surgery* 2023;152(6):1131e-1142e. DOI: 10.1097/PRS.0000000000010965. [Context Link 1] View abstract...
32. Padilla PL, Khoo KH, Ho T, Cole EL, Sirvent RZ, Phillips LG. Plastic surgery. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL, editors. *Sabiston Textbook of Surgery*. 21st ed. Elsevier; 2022:1916-1944. [Context Link 1, 2, 3, 4, 5]
33. Henry S, et al. Maximizing wound coverage in full-thickness skin defects: A randomized-controlled trial of autologous skin cell suspension and widely meshed autograft versus standard autografting. *Journal of Trauma and Acute Care Surgery* 2024;96(1):85-93. DOI: 10.1097/TA.0000000000004120. [Context Link 1] View abstract...
34. Rajput S, Kuruoglu D, Salinas CA, Sen I, Kalra M, Moran SL. Flap management of groin wounds following vascular procedures: A review of 270 flaps for vascular salvage. *Journal of Plastic, Reconstructive & Aesthetic Surgery* 2023;78:38-47. DOI: 10.1016/j.bjps.2023.01.028. [Context Link 1] View abstract...
35. Cinats DJ, Harley BJ, Loftus JB. Arteriovenous vascular loops in latissimus free flap reconstruction of cervical and cervicothoracic spine wounds. *Journal of Hand and Microsurgery* 2023;15(1):53-58. DOI: 10.1055/s-0041-1726620. [Context Link 1] View abstract...
36. Al-Aroomi MA, et al. Radial and ulnar forearm free flaps: a critical comparison of donor-site morbidity and its impact on quality of life. *Plastic and Reconstructive Surgery* 2024;154(3):650-661. DOI: 10.1097/PRS.0000000000011022. [Context Link 1] View abstract...
37. Morrison EJ, Matros E. Modern oncologic maxillary reconstruction. *Plastic and Reconstructive Surgery* 2024;154(3):601e-618e. DOI: 10.1097/PRS.0000000000011476. [Context Link 1] View abstract...
38. Practice Parameter for Surgical Treatment of Skin Redundancy for Obese and Massive Weight Loss Patients. [Internet] American Society of Plastic Surgeons. 2017 Jun Accessed at: <https://www.plasticsurgery.org>. [accessed 2025 Sep 05] [Context Link 1, 2]
39. Boudreault DJ, Sieber DA. Getting the best results in abdominoplasty: current advanced concepts. *Plastic and Reconstructive Surgery* 2019;143(3):628e-636e. DOI: 10.1097/PRS.0000000000005378. [Context Link 1, 2] View abstract...
40. Berkane Y, et al. Abdominoplasty and lower body lift surgery improves the quality of life after massive weight loss: a prospective multicenter study. *Plastic and Reconstructive Surgery* 2024;153(6):1101e-1110e. DOI: 10.1097/PRS.0000000000010683. [Context Link 1, 2] View abstract...
41. Drygalski K, Plonowska E, Hady ZR, Gluszynska P, Hady HR. Post-bariatric surgery abdominoplasty ameliorates psychological well-being in formerly obese patients: a cross-sectional recall study. *Journal of Clinical Medicine* 2025;14(12):DOI: 10.3390/jcm14124025. [Context Link 1, 2] View abstract...
42. Elmetts CA, et al. Joint American Academy of Dermatology-National Psoriasis Foundation guidelines of care for the management and treatment of psoriasis with phototherapy. *Journal of the American Academy of Dermatology* 2019;81(3):775-804. DOI: 10.1016/j.jaad.2019.04.042. (Reaffirmed 2025 Jun) [Context Link 1] View abstract...
43. Sabeti S, et al. Consensus statement for the management and treatment of port-wine birthmarks in Sturge-Weber syndrome. *JAMA Dermatology* 2021;157(1):98-104. DOI: 10.1001/jamadermatol.2020.4226. [Context Link 1] View abstract...
44. Garcia IC, Clark RA, Chung DH, Gaines N. Pediatric subcutaneous abscess: still a clinical exam-based diagnosis and treatment. *Children (Basel)* 2021;8(5):Online. DOI: 10.3390/children8050392. [Context Link 1, 2, 3] View abstract...
45. Ohzu M, Takazawa H, Furukawa S, Komeno Y. Anorectal abscess in a patient with neutropenia and refractory acute myeloid leukemia: To operate or not to Operate? *American Journal of Case Reports* 2021;22:Online. DOI: 10.12659/AJCR.931589. [Context Link 1] View abstract...
46. Feller K, et al. Management of sternal wound infection-determinants of length of stay and recurrence of infection after muscle flap coverage. *Thoracic and Cardiovascular Surgeon* 2023;Online. DOI: 10.1055/s-0043-1761923. [Context Link 1] View abstract...
47. Eilbert WP. Mammalian bites. In: Walls RM, editor. *Rosen's Emergency Medicine: Concepts and Clinical Practice*. 10th ed. Elsevier; 2023:682-689.e2. [Context Link 1, 2]
48. Hunstad DA. Animal and human bites. In: Kliegman RM, et al., editors. *Nelson Textbook of Pediatrics*. 22nd ed. Elsevier; 2025:4457-4460. [Context Link 1]

49. Lundy D, et al. Systematic Literature Review on the Management of Surgical Site Infections. [Internet] American Academy of Orthopaedic Surgeons. 2018 Jun Accessed at: <https://www.orthoguidelines.org/guidelines>. [accessed 2025 Sep 04] [Context Link 1]
50. Al-Hilli Z, Wilkerson A. Breast surgery: management of postoperative complications following operations for breast cancer. *Surgical Clinics of North America* 2021;101(5):845-863. DOI: 10.1016/j.suc.2021.06.014. [Context Link 1] View abstract...
51. Rubenstein RN, et al. Early complications in prepectoral tissue expander-based breast reconstruction. *Annals of Surgical Oncology* 2024;31(4):2766-2776. DOI: 10.1245/s10434-023-14861-x. [Context Link 1] View abstract...
52. Tarkin IS, Murawski CD, Mittweide PN. Temporizing care of acute traumatic foot and ankle injuries. *Orthopedic Clinics of North America* 2022;53(1):95-103. DOI: 10.1016/j.ocl.2021.09.002. [Context Link 1] View abstract...
53. Farah O, Farah G, Mumuni S, Volchenko E, Hutchinson MR. Acute compartment syndrome in the athlete. *Clinics in Sports Medicine* 2023;42(3):525-538. DOI: 10.1016/j.csm.2023.02.013. [Context Link 1] View abstract...
54. Badahdah HM, Zgonis T. External fixation for surgical offloading of the diabetic foot. *Clinics in Podiatric Medicine and Surgery* 2022;39(2):351-356. DOI: 10.1016/j.cpm.2021.11.007. [Context Link 1] View abstract...
55. Vesicular and bullous diseases. In: Dinulos JGH, editor. *Habif's Clinical Dermatology*. 7th ed. Elsevier; 2021:631-668.e1. [Context Link 1, 2]
56. Zhao W, Wang J, Zhu H, Pan M. Comparison of guidelines for management of pemphigus: a review of systemic corticosteroids, rituximab, and other immunosuppressive therapies. *Clinical Reviews in Allergy and Immunology* 2021;61(3):351-362. DOI: 10.1007/s12016-021-08882-1. [Context Link 1] View abstract...
57. Anderson HJ, Huang S, Lee JB. Paraneoplastic pemphigus/paraneoplastic autoimmune multiorgan syndrome: Part I. clinical overview and pathophysiology. *Journal of the American Academy of Dermatology* 2023;DOI: 10.1016/j.jaad.2023.08.020. [Context Link 1] View abstract...
58. Huang S, Anderson HJ, Lee JB. Paraneoplastic pemphigus/paraneoplastic autoimmune multiorgan syndrome: Part II. Diagnosis and management. *Journal of the American Academy of Dermatology* 2024;91(1):13-22. DOI: 10.1016/j.jaad.2023.08.084. [Context Link 1] View abstract...
59. Psoriasis and other papulosquamous diseases. In: Dinulos JGH, editor. *Habif's Clinical Dermatology*. 7th ed. Elsevier; 2021:264-330.e3. [Context Link 1, 2, 3]
60. Psoriasis: Assessment and Management. NICE Clinical Guideline CG153 [Internet] National Institute for Health and Care Excellence. 2017 Sep Accessed at: <https://www.nice.org.uk/guidance>. [accessed 2024 May 28] [Context Link 1, 2, 3]
61. Sbidian E, et al. Systemic pharmacological treatments for chronic plaque psoriasis: a network meta-analysis. *Cochrane Database of Systematic Reviews* 2025, Issue 8. Art. No.: CD011535. DOI: 10.1002/14651858.CD011535.pub7. [Context Link 1] View abstract...
62. Frysz M, Patel S, Li MOY, Griffiths CEM, Warren RB, Ashcroft DM. Prevalence, incidence, mortality, and healthcare resource use for generalised pustular psoriasis, palmoplantar pustulosis, and plaque psoriasis in England: a population-based cohort study. *British Journal of Dermatology* 2024;Online. DOI: 10.1093/bjd/ljae217. [Context Link 1] View abstract...
63. Barker JN, et al. Global Delphi consensus on treatment goals for generalized pustular psoriasis. *British Journal of Dermatology* 2025;192(4):706-716. DOI: 10.1093/bjd/ljae491. [Context Link 1] View abstract...
64. Seminario-Vidal L, et al. Society of Dermatology Hospitalists supportive care guidelines for the management of Stevens-Johnson syndrome/toxic epidermal necrolysis in adults. *Journal of the American Academy of Dermatology* 2020;82(6):1553-1567. DOI: 10.1016/j.jaad.2020.02.066. [Context Link 1, 2, 3, 4] View abstract...
65. Hama N, et al. Recent progress of Stevens-Johnson syndrome/toxic epidermal necrolysis: Diagnosis criteria, pathogenesis and therapy. *British Journal of Dermatology* 2024;Online. DOI: 10.1093/bjd/ljae321. [Context Link 1] View abstract...
66. Yan A, et al. Morbilliform eruptions: differentiating low-risk drug eruptions, severe cutaneous adverse reactions, viral eruptions, and acute graft-versus-host disease. *American Journal of Clinical Dermatology* 2025;26(3):379-393. DOI: 10.1007/s40257-025-00924-0. [Context Link 1] View abstract...
67. Shah H, Parisi R, Mukherjee E, Phillips EJ, Dodiuk-Gad RP. Update on Stevens-Johnson syndrome and toxic epidermal necrolysis: diagnosis and management. *American Journal of Clinical Dermatology* 2024;25(6):891-908. DOI: 10.1007/s40257-024-00889-6. [Context Link 1] View abstract...
68. Jacobsen A, et al. Systemic interventions for treatment of Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), and SJS/TEN overlap syndrome. *Cochrane Database of Systematic Reviews* 2022, Issue 3. Art. No.: CD013130. DOI: 10.1002/14651858.CD013130.pub2. [Context Link 1] View abstract...

69. Del Pozzo-Magana BR, Liy-Wong C. "Drugs and the Skin" A concise review of cutaneous adverse drug reactions. *British Journal of Clinical Pharmacology* 2022;Online. DOI: 10.1111/bcp.15490. [Context Link 1] View abstract...
70. Luong NDT, Duc HVN, Vu TTT, Tran KH, Pham VB. Prognosis of Stevens-Johnson syndrome and toxic epidermal necrolysis: a cohort study of 216 patients in an inpatient dermatology department. *Dermatology (Basil, Switzerland)* 2025;241(1):49-58. DOI: 10.1159/000542623. [Context Link 1] View abstract...
71. Kroshinsky D, Cardones ARG, Blumenthal KG. Drug reaction with eosinophilia and systemic symptoms. *New England Journal of Medicine* 2024;391(23):2242-2254. DOI: 10.1056/NEJMra2204547. [Context Link 1] View abstract...
72. Zuberbier T, et al. The International EAACI/GA2LEN/EuroGuiDerm/APAAACI guideline for the definition, classification, diagnosis and management of urticaria. *Allergy* 2022;77(3):734-766. DOI: 10.1111/all.15090. (Reaffirmed 2025 Jun) [Context Link 1, 2] View abstract...
73. Prostý C, et al. Prevalence, management, and anaphylaxis risk of cold urticaria: a systematic review and meta-analysis. *Journal of Allergy and Clinical Immunology. In Practice* 2022;10(2):586-596 e4. DOI: 10.1016/j.jaip.2021.10.012. [Context Link 1] View abstract...
74. Szymanski K, Schaefer P. Update on urticaria and angioedema. *Medical Clinics of North America* 2024;108(4):687-702. DOI: 10.1016/j.mcna.2023.08.004. [Context Link 1] View abstract...
75. Zuberbier T, et al. Chronic urticaria: unmet needs, emerging drugs, and new perspectives on personalised treatment. *Lancet* 2024;404(10450):393-404. DOI: 10.1016/S0140-6736(24)00852-3. [Context Link 1] View abstract...
76. McClanahan D, Funk T, Small A. Sweet syndrome in the pediatric population. *Dermatologic Clinics* 2022;40(2):179-190. DOI: 10.1016/j.det.2021.12.005. [Context Link 1] View abstract...
77. Shah N, Asdourian MS, Jacoby TV, Chen ST. Neutrophilic dermatosis and management strategies for the inpatient dermatologist. *Current Dermatology Reports* 2022;11(3):146-157. DOI: 10.1007/s13671-022-00364-7. [Context Link 1] View abstract...
78. Hines A, Kody S, Shakshouk H, Fett N, Alavi A, Ortega-Loayza A. Inflammatory and vaso-occlusive ulcers: part II - management. *Journal of the American Academy of Dermatology* 2024;Online. DOI: 10.1016/j.jaad.2023.12.077. [Context Link 1, 2] View abstract...
79. Pimentel MA, et al. Features that define clinical severity of ulcerative pyoderma gangrenosum: a Delphi consensus study of experts and patients on behalf of the US Medical Dermatology Society. *British Journal of Dermatology* 2023;188(4):566-568. DOI: 10.1093/bjd/ljac137. [Context Link 1] View abstract...
80. Pang Y, et al. Deciphering the etiologies of adult erythroderma: an updated guide to presentations, diagnostic tools, Pathophysiologies, and Treatments. *American Journal of Clinical Dermatology* 2024;25(6):927-950. DOI: 10.1007/s40257-024-00886-9. [Context Link 1] View abstract...
81. Wound Committee, Wound, Ostomy, and Continence Nurses Society (WOCN). Lower-extremity wounds due to venous disease, arterial disease, or diabetes mellitus and/or neuropathic disease: Clinical resource guide. [Internet] Wound, Ostomy, and Continence Nurses Society (WOCN). 2024 Accessed at: <https://www.wocn.org/document-library/>. [accessed 2025 Sep 17] [Context Link 1, 2, 3, 4]
82. Senneville E, et al. IWGDF/IDSA guidelines on the diagnosis and treatment of diabetes-related foot infections (IWGDF/IDSA 2023). *Clinical Infectious Diseases* [Internet] 2023 Oct Accessed at: <https://www.idsociety.org/practice-guideline/diabetic-foot-infections/>. [accessed 2025 Sep 03] DOI: 10.1093/cid/ciad527. [Context Link 1, 2] View abstract...
83. Hingorani A, et al. The management of diabetic foot: a clinical practice guideline by the Society for Vascular Surgery in collaboration with the American Podiatric Medical Association and the Society for Vascular Medicine. *Journal of Vascular Surgery* 2016;63(2 Suppl):3S-21S. DOI: 10.1016/j.jvs.2015.10.003. (Reaffirmed 2025 Jun) [Context Link 1, 2, 3] View abstract...
84. Alexander JB. Lower-extremity vascular ulcers: assessment and approaches to management. *Medical Clinics of North America* 2023;107(5):911-923. DOI: 10.1016/j.mcna.2023.05.003. [Context Link 1] View abstract...
85. Armstrong DG, Tan TW, Boulton AJM, Bus SA. Diabetic Foot Ulcers: A Review. *Journal of the American Medical Association* 2023;330(1):62-75. DOI: 10.1001/jama.2023.10578. [Context Link 1] View abstract...
86. Becker SL, Kody S, Fett NM, Hines A, Alavi A, Ortega-Loayza AG. Approach to the atypical wound. *American Journal of Clinical Dermatology* 2024;25(4):559-584. DOI: 10.1007/s40257-024-00865-0. [Context Link 1] View abstract...
87. Bisgaard EK, Bulger EM. Current diagnosis and management of necrotizing soft tissue infections: what you need to know. *Journal of Trauma and Acute Care Surgery* 2024;Online. DOI: 10.1097/TA.0000000000004351. [Context Link 1] View abstract...

88. Salle R, Del Giudice P, Skayem C, Hua C, Chosidow O. Secondary bacterial infections in patients with atopic dermatitis or other common dermatoses. *American Journal of Clinical Dermatology* 2024;25(4):623-637. DOI: 10.1007/s40257-024-00856-1. [Context Link 1, 2] View abstract...
89. Chen P, Bukhman AK. Electrical and lightning injuries. In: Walls RM, editor. *Rosen's Emergency Medicine: Concepts and Clinical Practice*. 10th ed. Elsevier; 2023:1781-1787.e2. [Context Link 1]
90. Curtis AM, Erickson TB. Venomous animal injuries. In: Walls RM, editor. *Rosen's Emergency Medicine: Concepts and Clinical Practice*. 10th ed. Elsevier; 2023:690-708.e3. [Context Link 1]
91. Hass RM, Sturgill FL, Young NP. Sensory and motor neurologic presentations of herpes zoster (Shingles). *Mayo Clinic Proceedings* 2023;98(8):1128-1130. DOI: 10.1016/j.mayocp.2023.03.009. [Context Link 1] View abstract...
92. Cai PL, Hitchman LH, Mohamed AH, Smith GE, Chetter I, Carradice D. Endovenous ablation for venous leg ulcers. *Cochrane Database of Systematic Reviews* 2023, Issue 7. Art. No.: CD009494. DOI: 10.1002/14651858.CD009494.pub3. [Context Link 1] View abstract...
93. de Moraes Silva MA, Nelson A, Bell-Syer SE, Jesus-Silva SG, Miranda F. Compression for preventing recurrence of venous ulcers. *Cochrane Database of Systematic Reviews* 2024, Issue 3. Art. No.: CD002303. DOI: 10.1002/14651858.CD002303.pub4. [Context Link 1] View abstract...
94. Gornik HL, et al. 2024 ACC/AHA/AACVPR/APMA/ABC/SCAI/SVM/SVN/SVS/SIR/VESS guideline for the management of lower extremity peripheral artery disease: a report of the American College of Cardiology/American Heart Association Joint committee on clinical practice guidelines. *Circulation* 2024;149(24):Online. DOI: 10.1161/CIR.0000000000001251. [Context Link 1, 2] View abstract...
95. Kianfar N, Daneshpazhooh M, Lehman JS. Pemphigus vulgaris. *Mayo Clinic Proceedings* 2024;99(4):607-609. DOI: 10.1016/j.mayocp.2023.11.006. [Context Link 1] View abstract...
96. Norman G, et al. Negative pressure wound therapy for surgical wounds healing by primary closure. *Cochrane Database of Systematic Reviews* 2022, Issue 4. Art. No.: CD009261. DOI: 10.1002/14651858.CD009261.pub7. [Context Link 1, 2] View abstract...
97. Shi J, et al. Negative pressure wound therapy for treating pressure ulcers. *Cochrane Database of Systematic Reviews* 2023, Issue 5. Art. No.: CD011334. DOI: 10.1002/14651858.CD011334.pub3. [Context Link 1, 2] View abstract...
98. Saeg F, Orazi R, Bowers GM, Janis JE. Evidence-based nutritional interventions in wound care. *Plastic and Reconstructive Surgery* 2021;148(1):226-238. DOI: 10.1097/PRS.0000000000008061. [Context Link 1] View abstract...
99. Langer G, Wan CS, Fink A, Schwingshackl L, Schoberer D. Nutritional interventions for preventing and treating pressure ulcers. *Cochrane Database of Systematic Reviews* 2024, Issue 2. Art. No.: CD003216. DOI: 10.1002/14651858.CD003216.pub3. [Context Link 1] View abstract...
100. Nield LS, Kamat D. Fever. In: Kliegman RM, et al., editors. *Nelson Textbook of Pediatrics*. 22nd ed. Elsevier; 2025:1640-1642. [Context Link 1]
101. Melia MT. Approach to fever or suspected infection in the normal host. In: Goldman L, Cooney KA, editors. *Goldman-Cecil Medicine*. 27th ed. Elsevier; 2024:1845-1851. [Context Link 1, 2]
102. Sifri CD. Approach to fever and suspected infection in the immunocompromised host. In: Goldman L, Cooney KA, editors. *Goldman-Cecil Medicine*. 27th ed. Elsevier; 2024:1851-1862. [Context Link 1, 2]
103. Hooper DC, Shenoy ES, Elshaboury RH. Treatment and prophylaxis of bacterial infections. In: Loscalzo J, Fauci A, Kasper D, Hauser S, Longo D, Jameson JL, editors. *Harrison's Principles of Internal Medicine*. 21st ed. McGraw Hill Education; 2022:1148-1163. [Context Link 1]
104. Blum FC, Biros MH. Fever in the adult patient. In: Walls RM, editor. *Rosen's Emergency Medicine: Concepts and Clinical Practice*. 10th ed. Elsevier; 2023:90-95.e1. [Context Link 1]
105. Mick NW. Pediatric fever. In: Walls RM, editor. *Rosen's Emergency Medicine: Concepts and Clinical Practice*. 10th ed. Elsevier; 2023:2067-2077.e2. [Context Link 1]
106. Singh M, Fernandez-Frackelton M. Bacteria. In: Walls RM, editor. *Rosen's Emergency Medicine: Concepts and Clinical Practice*. 10th ed. Elsevier; 2023:1586-1609.e3. [Context Link 1]
107. Swarm RA, et al. Adult Cancer Pain. *NCCN Clinical Practice Guidelines in Oncology [Internet] National Comprehensive Cancer Network (NCCN)*. v. 2.2025; 2025 May 21 Accessed at: <https://www.nccn.org/>. [accessed 2025 Jun 04] [Context Link 1]
108. Cohen SP. Pain. In: Goldman L, Cooney KA, editors. *Goldman-Cecil Medicine*. 27th ed. Elsevier; 2024:133-141.e1. [Context Link 1]

109. Peterson SJB, Weisman SJ. Pediatric pain management. In: Kliegman RM, et al., editors. Nelson Textbook of Pediatrics. 22nd ed. Elsevier; 2025:677-700. [Context Link 1]
110. Berger MJ, et al. Antiemesis. NCCN Clinical Practice Guidelines in Oncology [Internet] National Comprehensive Cancer Network (NCCN). v. 2.2025; 2025 May 12 Accessed at: <https://www.nccn.org/>. [accessed 2025 May 19] [Context Link 1]
111. Fourth consensus guidelines for the management of postoperative nausea and vomiting: erratum. Anesthesia and Analgesia 2020;131(5):e241. DOI: 10.1213/ANE.0000000000005245. [Context Link 1] View abstract...
112. Bettin CC. Diabetic foot. In: Azar FM, Beaty JH, editors. Campbell's Operative Orthopaedics. 14th ed. Philadelphia, PA: Elsevier; 2021:4314-4344.e4. [Context Link 1]
113. Tan SM, Walker WC. Prevention and management of chronic wounds. In: Cifu DX, Lew HL, editors. Braddom's Rehabilitation Care: A Clinical Handbook. 2nd ed. Elsevier; 2025:227-234. [Context Link 1]
114. Liao N. Wound care basics. In: Gershel JC, Rauch DA, editors. Caring for the Hospitalized Child: A Handbook of Inpatient Pediatrics. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2023:829-837. [Context Link 1]
115. Vance H. Wound care. In: Gonzalez-Fernandez M, Schaaf S, Zumsteg JM, Perret D, Kennedy DJ, editors. Handbook of Physical Medicine and Rehabilitation. Springer Publishing Company; 2022:469-480. [Context Link 1]
116. Nix DP, Bryant RA. Pressure ulcers/injuries. In: Bryant RA, Nix DP, editors. Acute & Chronic Wounds: Intraprofessionals from Novice to Expert. 6th ed. Elsevier; 2024:213-257. [Context Link 1]
117. Braza DW, Yacub Martin JN. Diabetic foot and peripheral arterial disease. In: Frontera WR, Silver JK, Rizzo TD Jr, editors. Essentials of Physical Medicine and Rehabilitation: Musculoskeletal Disorders, Pain, and Rehabilitation. 4th ed. Philadelphia, PA: Elsevier Saunders; 2019:719-723. [Context Link 1]
118. Hoffer LJ, Bistran BR, Driscoll DF. Enteral and parenteral nutrition. In: Loscalzo J, Fauci A, Kasper D, Hauser S, Longo D, Jameson JL, editors. Harrison's Principles of Internal Medicine. 21st ed. McGraw Hill Education; 2022:2539-2546. [Context Link 1]
119. Centers for Medicare and Medicaid Services. "Admissions." 42 CFR 412.3 Washington, DC 2025 Jul [accessed 2025 Jul 22] Accessed at: <https://www.ecfr.gov/current/title-42/chapter-IV/subchapter-B/part-412>. [Context Link 1]
120. Centers for Medicare and Medicaid Services. "Hospital services excluded from payment under the hospital outpatient prospective payment system." 42 CFR 419.22 Washington, DC 2023 Jul [accessed 2025 Jul 22] Accessed at: <https://www.ecfr.gov/>. [Context Link 1]
121. Centers for Medicare and Medicaid Services. "Requirements relating to basic benefits." 42 CFR 422.101 Washington, DC 2025 Jun 03 [accessed 2025 Jul 23] Accessed at: <https://www.ecfr.gov/>. [Context Link 1]
122. Centers for Medicare and Medicaid Services. Medicare Benefit Policy Manual. Chapter 1 - Inpatient Hospital Services Covered Under Part A Rev. 10892 [Internet] Centers for Medicare and Medicaid Services. 2021 Aug Accessed at: <https://www.cms.gov/manuals/>. [accessed 2025 Sep 09] [Context Link 1]
123. Centers for Medicare and Medicaid Services. Medicare Benefit Policy Manual. Chapter 6 - Hospital Services Covered Under Part B Rev. 12425 [Internet] Centers for Medicare and Medicaid Services. 2023 Dec Accessed at: <http://www.cms.gov/manuals/>. [accessed 2025 Sep 09] [Context Link 1]
124. Centers for Medicare and Medicaid Services. Medicare Benefit Policy Manual. Chapter 15 - Covered Medical and Other Health Services Rev. 13108 [Internet] Centers for Medicare and Medicaid Services. 2025 Apr 11 Accessed at: <https://www.cms.gov/manuals/>. [accessed 2025 Sep 09] [Context Link 1]
125. Centers for Medicare and Medicaid Services. Medicare Program Integrity Manual. Chapter 6, Section 6.5 - Medical Review of Inpatient Hospital Claims for Part A Payment Rev. 10365 [Internet] Centers for Medicare and Medicaid Services. 2020 Oct 02 Accessed at: <https://www.cms.gov/medicare/regulations-guidance/manuals/internet-only-manuals-ioms>. [accessed 2025 Sep 09] [Context Link 1]
126. Medicare Coverage Database. [Internet] Centers for Medicare and Medicaid Services. Accessed at: <https://www.cms.gov/medicare-coverage-database/search.aspx?> Updated 2025 [accessed 2025 Oct 23] [Context Link 1]

Footnotes

[A] Propranolol is first-line treatment. A specialty society guideline states that there are situations when surgery may be indicated. These include lesions that have failed to improve with local wound care or pharmacotherapy, lesions that are well-localized and early surgery will simplify later reconstruction (eg, ear or eyelid), or

resection is likely to be necessary at some point and scarring will not be different if surgery is postponed. In most cases, surgery is deferred until the child is 3 to 5 years of age. Most infantile hemangiomas do not improve significantly after 3 to 4 years of age.(8) [A in Context Link 1]

[B] Stage 3 pressure injuries include full-thickness tissue loss, and subcutaneous fat may be visible. Stage 4 is full-thickness tissue loss with exposed bone, tendon, or muscle.(17)(18)(19) [B in Context Link 1]

[C] Patients with morbid obesity who undergo bariatric surgery can experience massive weight loss, resulting in excess abdominal skin that can become the source of a variety of complications, including candidal intertrigo, dermatitis, lymphedema, ischemic panniculitis, and restricted mobility. Panniculectomy is the surgical removal of excess abdominal skin and fat without tightening of underlying muscles. Panniculectomy is usually performed after patients develop chronic intertrigo, other skin infection, ulceration, or mechanical irritation that has not responded to medical treatment and is the cause of a significant reduction in the patient's quality of life (eg, pain, limited mobility). Abdominoplasty involves the removal of excess abdominal skin and fat, fascial plication of a rectus muscle diastasis, and repositioning of the umbilicus. Abdominoplasty has similar indications and also may be performed after panniculectomy to address residual abdominal wall laxity and horizontal skin excess. These procedures are often performed after patients undergo massive weight loss but can also be necessary without weight loss (intact pannus causing the signs and symptoms).(38)(39)(40)(41) [C in Context Link 1]

[D] Most treatment regimens, including immunosuppressive agents, tar, or anthralin and ultraviolet light (eg, Ingram, Goeckerman, psoralen-UVA), can be performed on an outpatient basis.(59)(60)(61) [D in Context Link 1]

[E] An expert panel recommends conservative management of affected skin in Stevens-Johnson syndrome and toxic epidermal necrolysis allowing preservation of the epidermis to function as a biologic dressing.(64) [E in Context Link 1, 2]

[F] See Intensive, Intermediate, and Telemetry Care Guidelines [↗](#) ISC. [F in Context Link 1]

[G] See Clinical Indications for Procedure in this guideline. [G in Context Link 1]

Definitions

Activity level acceptable

- Activity level acceptable, as indicated by **1 or more** of the following:
 - Patient ambulatory and can perform ADL as appropriate for age and development
 - Activity at baseline
 - Activity level acceptable for next level of care

Altered mental status

- Altered mental status (ie, different from baseline), as indicated by **1 or more** of the following(1)(2)(3)(4):
 - Confusional state (eg, disorientation, difficulty following commands, deficit in attention)
 - Lethargy (eg, awake or arousable, but with drowsiness; reduced awareness of self and environment)
 - Obtundation (ie, arousable only with strong stimuli, lessened interest in environment, slowed responses to stimulation)
 - Stupor (ie, may be arousable but patient does not return to normal baseline level of awareness)
 - Coma (ie, not arousable)

References

1. Maher PJ. Confusion. In: Walls RM, editor. Rosen's Emergency Medicine: Concepts and Clinical Practice. 10th ed. Elsevier; 2023:126-131.e1.

2. Lei C, Smith C. Depressed consciousness and coma. In: Walls RM, editor. Rosen's Emergency Medicine: Concepts and Clinical Practice. 10th ed. Elsevier; 2023:117-125.e1.
3. Abraham G, Maher PJ. Delirium and dementia. In: Walls RM, editor. Rosen's Emergency Medicine: Concepts and Clinical Practice. 10th ed. Elsevier; 2023:1269-1280.e2.
4. Holler-Managan YF. Neurologic evaluation. In: Kliegman RM, et al., editors. Nelson Textbook of Pediatrics. 22nd ed. Elsevier; 2025:3550-3560.

General Discharge Criteria met

- General Discharge Criteria met or Pediatric General Discharge Criteria met (if either is relevant or necessary for patient's condition)

Hemodynamic instability

- Hemodynamic instability, as indicated by **1 or more** of the following:
 - Vital sign abnormality not corrected by appropriate treatment, as indicated by **1 or more** of the following^[A]:
 - Tachycardia that persists despite appropriate treatment (eg, treatment of underlying cause, despite observation care)^[A]
 - Hypotension that persists despite appropriate treatment (eg, treatment of underlying cause, despite observation care)^[A]
 - Orthostatic hypotension that persists despite appropriate treatment (eg, treatment of underlying cause, despite observation care)^[A]
 - Severe hypotension in adult patient, as indicated by **1 or more** of the following:
 - Systolic blood pressure less than 80 mm Hg⁽¹⁾^[A]
 - Shock index greater than 1.0 (shock index is the heart rate divided by systolic blood pressure)^{[A](2)(3)(4)}
 - Mean arterial pressure^[B] less than 65 mm Hg  MAP Calculator^{[A](1)(6)}
 - IV inotropic or vasopressor medication required to maintain adequate blood pressure or perfusion⁽³⁾⁽⁶⁾
 - Hypoperfusion due to hypotension, as indicated by **ALL** of the following:
 - Hypotension
 - Evidence of hypoperfusion, as indicated by **1 or more** of the following:
 - Lactate of 2.0 mmol/L (18 mg/dL) or more secondary to hypotension (ie, hypoperfusion)^{[C](3)(6)(8)}
 - Metabolic acidosis (arterial or venous^[D] pH less than 7.35) not otherwise explained⁽³⁾⁽⁶⁾⁽⁸⁾
 - Significant end organ dysfunction due to hypotension (eg, Altered mental status, myocardial ischemia, 2-fold or higher acute increase in serum creatinine)⁽³⁾⁽⁶⁾
 - Severe hypotension in pediatric patient, as indicated by **1 or more** of the following:
 - Systolic blood pressure less than 80 mm Hg in child 6 to 17 years of age^{[A](14)}
 - Systolic blood pressure less than 75 mm Hg in child 6 months to 5 years of age^{[A](14)}
 - Shock index greater than 0.9 in child 13 to 17 years of age (shock index is the heart rate divided by systolic blood pressure)^{[A](2)(15)}
 - Shock index greater than 1.0 in child 7 to 12 years of age (shock index is the heart rate divided by systolic blood pressure)^{[A](2)(15)}
 - Shock index greater than 1.2 in child 4 to 6 years of age (shock index is the heart rate divided by systolic blood pressure)^{[A](2)(15)}
 - IV inotropic or vasopressor medication required to maintain adequate blood pressure or perfusion⁽⁵⁾⁽⁶⁾
 - Hypoperfusion due to hypotension, as indicated by **ALL** of the following:
 - Hypotension
 - Evidence of hypoperfusion, as indicated by **1 or more** of the following:
 - Lactate of 2.0 mmol/L (18 mg/dL) or more secondary to hypotension (ie, hypoperfusion)^{[C](6)(8)}
 - Metabolic acidosis (arterial or venous pH less than 7.35) not otherwise explained^{[D](5)(6)(14)}

- Significant end organ dysfunction due to hypotension (eg, Altered mental status, myocardial ischemia, 2-fold or higher acute increase in serum creatinine)(5)(6)(14)

References

1. Schriger DL. Approach to the patient with abnormal vital signs. In: Goldman L, Cooney KA, editors. Goldman-Cecil Medicine. 27th ed. Elsevier; 2024:32-35.
2. Koch E, Lovett S, Nghiem T, Riggs RA, Rech MA. Shock index in the emergency department: utility and limitations. Open Access Emergency Medicine 2019;11:179-199. DOI: 10.2147/OAEM.S178358.
3. Angus DC. Approach to the patient with shock. In: Goldman L, Cooney KA, editors. Goldman-Cecil Medicine. 27th ed. Elsevier; 2024:658-665.
4. Balhara KS, Hsieh YH, Hamade B, Circh R, Kelen GD, Bayram JD. Clinical metrics in emergency medicine: the shock index and the probability of hospital admission and inpatient mortality. Emergency Medicine Journal 2017;34(2):89-94. DOI: 10.1136/emmermed-2015-205532.
5. Weiss SL, Tissieres P, Peters MJ. Shock. In: Kliegman RM, et al., editors. Nelson Textbook of Pediatrics. 22nd ed. Elsevier; 2025:600-611.
6. Singer M, et al. The Third International Consensus definitions for sepsis and septic shock (Sepsis-3). Journal of the American Medical Association 2016;315(8):801-810. DOI: 10.1001/jama.2016.0287.
7. Wardi G, Brice J, Correia M, Liu D, Self M, Tainter C. Demystifying lactate in the emergency department. Annals of Emergency Medicine 2020;75(2):287-298. DOI: 10.1016/j.annemergmed.2019.06.027.
8. Kraut JA, Madias NE. Lactic acidosis. New England Journal of Medicine 2014;371(24):2309-2319. DOI: 10.1056/NEJMra1309483.
9. Olivieri L, Chasm R. Diabetic ketoacidosis in the pediatric emergency department. Emergency Medicine Clinics of North America 2013;31(3):755-773. DOI: 10.1016/j.emc.2013.05.004.
10. Maloney GE, Glauser JM. Diabetes mellitus and disorders of glucose homeostasis. In: Walls RM, editor. Rosen's Emergency Medicine: Concepts and Clinical Practice. 10th ed. Elsevier; 2023:1543-1558.e2.
11. Arnold TD, Miller M, van Wessel KP, Evans JA, Balogh ZJ. Base deficit from the first peripheral venous sample: a surrogate for arterial base deficit in the trauma bay. Journal of Trauma 2011;71(4):793-7; discussion 797. DOI: 10.1097/TA.0b013e31822ad694.
12. Malinoski DJ, Todd SR, Slone S, Mullins RJ, Schreiber MA. Correlation of central venous and arterial blood gas measurements in mechanically ventilated trauma patients. Archives of Surgery 2005;140(11):1122-5. DOI: 10.1001/archsurg.140.11.1122.
13. Zakrison T, McFarlan A, Wu YY, Keshet I, Nathens A. Venous and arterial base deficits: do these agree in occult shock and in the elderly? A Bland-Altman analysis. Journal of Trauma and Acute Care Surgery 2013;74(3):936-9. DOI: 10.1097/TA.0b013e318282747a.
14. Alexander PMA, et al. Cardiovascular dysfunction criteria in critically ill children: the PODIUM consensus conference. Pediatrics 2022;149(1 Suppl 1):S39-S47. DOI: 10.1542/peds.2021-052888F.
15. Ramgopal S. The shock index among children presenting to the emergency department: analysis of nationally representative sample. Journal of Emergency Medicine 2024;67(2):e146-e156. DOI: 10.1016/j.jemermed.2024.03.022.

Footnotes

- A. Criteria based upon clinician-acquired numeric values (eg, vital signs, oxygen saturation) should be used if they are accurate reflections of the patient's condition. Transitory findings (eg, abnormal only upon initial emergency department intake or only one time out of multiple readings) that rapidly improve with no or minimal treatment usually do not reflect disease severity or risk for deterioration. This does not imply that an initial or one-time reading cannot ever be applicable. The goal is to separate erroneous or incidental findings from those that truly represent the patient's clinical picture.
- B. The mean arterial pressure (MAP) takes into account both SBP and DBP readings.(3)(5)
- C. There are numerous causes of an elevated lactate level. The most common are cardiogenic or hypovolemic shock, severe heart failure, severe trauma, or sepsis. However, there are also other etiologies to consider such as vigorous exercise, seizures, liver disease, or medication use (eg, metformin, beta2-agonists); therefore, interpretation of elevated lactate levels requires consideration of the clinical context (eg, well-appearing post exercise vs hypotensive). The severity and persistence of the elevation can sometimes be helpful in this differentiation. In most instances of lactic acidosis, blood pH is less than 7.35, with a serum bicarbonate level of 20 mEq/L (mmol/L) or lower. However, a coexisting respiratory or metabolic alkalosis can mask these findings.(7)(8)

- D. Analyses have concluded that venous and arterial pH measurements are highly correlated, with small differences between them that are usually not clinically significant.⁽⁹⁾⁽¹⁰⁾⁽¹¹⁾⁽¹²⁾⁽¹³⁾ If a mixed acid-base disorder is suspected, an arterial blood gas is indicated.⁽¹⁰⁾

Hypotension

- Hypotension, as indicated by **1 or more** of the following:
 - Hypotension in adult patient, as indicated by **1 or more** of the following:
 - Systolic blood pressure less than 90 mm Hg^{[A][B]}(1)
 - Mean arterial pressure^[C] less than 70 mm Hg^{[A][B]}  MAP Calculator⁽¹⁾⁽²⁾
 - Decrease in baseline systolic blood pressure of 30 mm Hg or more, with significant signs or symptoms due to lower blood pressure (eg, near syncope, syncope, chest pain)^{[A][B]}(1)
 - Hypotension in pediatric patient, as indicated by **1 or more** of the following:
 - Systolic blood pressure less than 110 mm Hg in child 13 to 17 years of age^{[A][D]}(3)
 - Systolic blood pressure less than 100 mm Hg in child 6 to 12 years of age^{[A][D]}(3)
 - Systolic blood pressure less than 95 mm Hg in child 3 to 5 years of age^{[A][D]}(3)
 - Systolic blood pressure less than 90 mm Hg in child 1 or 2 years of age^{[A][D]}(3)
 - Systolic blood pressure less than 80 mm Hg in infant 6 to 11 months of age^{[A][D]}(3)
 - Systolic blood pressure less than 70 mm Hg in infant 3 to 5 months of age^{[A][D]}(3)
 - Systolic blood pressure less than 65 mm Hg in infant 1 or 2 months of age^{[A][D]}(3)

References

1. Schrager DL. Approach to the patient with abnormal vital signs. In: Goldman L, Cooney KA, editors. Goldman-Cecil Medicine. 27th ed. Elsevier; 2024:32-35.
2. Puskasich MA, Jones AE. Shock. In: Walls RM, editor. Rosen's Emergency Medicine: Concepts and Clinical Practice. 10th ed. Elsevier; 2023:34-41.e1.
3. Anderson CC, Kapoor S, Mark TE. Pediatric parameters and equipment. In: Anderson CC, Kapoor S, Mark TE, editors. The Harriet Lane Handbook: A Manual for Pediatric House Officers. 23rd ed. Elsevier; 2024:i-iii.

Footnotes

- A. Criteria based upon clinician-acquired numeric values (eg, vital signs, oxygen saturation) should be used if they are accurate reflections of the patient's condition. Transitory findings (eg, abnormal only upon initial emergency department intake or only one time out of multiple readings) that rapidly improve with no or minimal treatment usually do not reflect disease severity or risk for deterioration. This does not imply that an initial or one-time reading cannot ever be applicable. The goal is to separate erroneous or incidental findings from those that truly represent the patient's clinical picture.
- B. Interpretation of blood pressure requires clinical judgment and consideration of several patient-specific factors, such as the patient's baseline blood pressure, medications, and clinical impact. For example, an elderly patient with heart failure may be prescribed medication with the intentional goal of a reduced pressure. If the patient's baseline SBP is 92 mm Hg to 96 mm Hg, absent signs or symptoms of hypotension, an emergency department SBP of 86 mm Hg should not automatically be categorized as hypotensive. This would hold for mean arterial pressure (MAP) as well. The numeric values included in this definition are provided to allow for consistency in terms of a technical definition of the term hypotension. Whether a blood pressure below the technical threshold is clinically meaningful is a matter of persistence, context, and clinical judgment.
- C. The mean arterial pressure (MAP) takes into account both SBP and DBP readings.
- D. Interpretation of blood pressure requires clinical judgment and consideration of several patient-specific factors, such as the patient's baseline blood pressure, medications, and clinical impact. The numeric values included in this definition are provided to allow for consistency in terms of a technical definition of the term

hypotension. Whether a blood pressure below the technical threshold is clinically meaningful is a matter of persistence, context, and clinical judgment.

Intake acceptable

- Intake acceptable, as indicated by **1 or more** of the following(1):
 - Oral hydration, medications, and diet
 - Enteral hydration, medications, and diet
 - Administration routes performable at next level of care

References

1. Hoffer LJ, Bistrian BR, Driscoll DF. Enteral and parenteral nutrition. In: Loscalzo J, Fauci A, Kasper D, Hauser S, Longo D, Jameson JL, editors. Harrison's Principles of Internal Medicine. 21st ed. McGraw Hill Education; 2022:2539-2546.

No infection, or status acceptable

- No infection, or status acceptable, as indicated by **1 or more** of the following(1)(2)(3)(4)(5):
 - No infection present
 - Infection status acceptable for next level of care, as indicated by **ALL** of the following(6):
 - WBC count normal, stable, or declining with treatment
 - Adequate treatment performable at next level of care
 - Organism and sensitivities identified, or adequate clinical response to empiric therapy
 - Repeat cultures negative or not needed

References

1. Hooper DC, Shenoy ES, Elshaboury RH. Treatment and prophylaxis of bacterial infections. In: Loscalzo J, Fauci A, Kasper D, Hauser S, Longo D, Jameson JL, editors. Harrison's Principles of Internal Medicine. 21st ed. McGraw Hill Education; 2022:1148-1163.
2. Blum FC, Biros MH. Fever in the adult patient. In: Walls RM, editor. Rosen's Emergency Medicine: Concepts and Clinical Practice. 10th ed. Elsevier; 2023:90-95.e1.
3. Mick NW. Pediatric fever. In: Walls RM, editor. Rosen's Emergency Medicine: Concepts and Clinical Practice. 10th ed. Elsevier; 2023:2067-2077.e2.
4. Melia MT. Approach to fever or suspected infection in the normal host. In: Goldman L, Cooney KA, editors. Goldman-Cecil Medicine. 27th ed. Elsevier; 2024:1845-1851.
5. Sifri CD. Approach to fever and suspected infection in the immunocompromised host. In: Goldman L, Cooney KA, editors. Goldman-Cecil Medicine. 27th ed. Elsevier; 2024:1851-1862.
6. Singh M, Fernandez-Frackelton M. Bacteria. In: Walls RM, editor. Rosen's Emergency Medicine: Concepts and Clinical Practice. 10th ed. Elsevier; 2023:1586-1609.e3.

No inpatient interventions needed

- No inpatient interventions needed; examples include:
 - Vital signs, neurologic signs, or vascular checks more often than feasible at next level of care
 - Cardiac or respiratory monitoring

- IV fluid to replace significant ongoing losses
- Monitoring need for transfusion due to ongoing blood loss
- Further burn or skin repair surgery planned in next 24 hours
- Tissue monitoring for compartment syndrome
- Procedure or care needed not appropriate for next level of care

Orthostatic hypotension

- Orthostatic hypotension,[A][B] as indicated by **1 or more** of the following(1)(2)(3):
 - Fall in SBP of 20 mm Hg or more 1 to 3 minutes after patient sits or stands from recumbent position
 - Fall in DBP of 10 mm Hg or more 1 to 3 minutes after patient sits or stands from recumbent position

References

1. Shibao C, Lipsitz LA, Biaggioni I, American Society of Hypertension Writing Group. Evaluation and treatment of orthostatic hypotension. *Journal of the American Society of Hypertension* 2013 Jul-Aug;7(4):317-324. DOI: 10.1016/j.jash.2013.04.006.
2. Dalal AS, Van Hare GF. Syncope. In: Kliegman RM, et al., editors. *Nelson Textbook of Pediatrics*. 22nd ed. Elsevier; 2025:592-599.
3. Fang JC, O'Gara PT. History and physical examination: an evidence-based approach. In: Libby P, Bonow RO, Mann DL, Tomaselli GF, Bhatt DL, Solomon SD, editors. *Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine*. 12th ed. Elsevier; 2022:123-140.

Footnotes

- A. Concomitant measurements of the heart rate are important to measure to help diagnose subtypes of orthostatic hypotension (eg, the lack of a compensatory increase in heart rate is typical of autonomic failure and an exaggerated tachycardia may be reflective of volume depletion). However, the heart rate is not a component of the definition of orthostatic hypotension, which relies upon blood pressure alone.(1)(2)(3)
- B. Criteria based upon clinician acquired numeric values (eg, vital signs, oxygen saturation) should be used if they are accurate reflections of the patient's condition. Transitory findings (eg, abnormal only upon initial emergency department intake or only one time out of multiple readings) that rapidly improve with no or minimal treatment usually do not reflect disease severity or risk for deterioration. This does not imply that an initial or one-time reading cannot ever be applicable. The goal is to separate erroneous or incidental findings from those that truly represent the patient's clinical picture.

Pain and nausea absent or adequately managed

- Pain and nausea absent or adequately managed, as indicated by **1 or more** of the following(1)(2)(3)(4)(5):
 - No pain or nausea
 - Minimal discomfort on oral medications
 - Pain and nausea managed on regimen performable at next level of care

References

1. Swarm RA, et al. Adult Cancer Pain. *NCCN Clinical Practice Guidelines in Oncology [Internet] National Comprehensive Cancer Network (NCCN)*. v. 2.2025; 2025 May 21 Accessed at: <https://www.nccn.org/>. [accessed 2025 Jun 04]
2. Cohen SP. Pain. In: Goldman L, Cooney KA, editors. *Goldman-Cecil Medicine*. 27th ed. Elsevier; 2024:133-141.e1.
3. Peterson SJB, Weisman SJ. Pediatric pain management. In: Kliegman RM, et al., editors. *Nelson Textbook of Pediatrics*. 22nd ed. Elsevier; 2025:677-700.
4. Berger MJ, et al. Antiemesis. *NCCN Clinical Practice Guidelines in Oncology [Internet] National Comprehensive Cancer Network (NCCN)*. v. 2.2025; 2025 May 12 Accessed at: <https://www.nccn.org/>. [accessed 2025 May 19]

5. Fourth consensus guidelines for the management of postoperative nausea and vomiting: erratum. Anesthesia and Analgesia 2020;131(5):e241. DOI: 10.1213/ANE.0000000000005245.

Social Determinants of Health Assessment

- Risk of poor health outcomes may be increased by the presence of **1 or more** of the following social determinants of health(1)(2)(3):
 - Housing insecurity, as indicated by **1 or more** of the following:
 - Individual or caregiver's current living situation is **1 or more** of the following(4):
 - Does not have own housing (eg, staying in a hotel, shelter, or with others)
 - Has own housing (eg, house, apartment), but at risk of losing it in the future (ie, behind on rent or mortgage)
 - Has own housing (eg, house, apartment), but has lived in 3 or more places in past year
 - Current housing has **1 or more** of the following:
 - Electrical appliances (eg, stove, refrigerator) not working or unavailable
 - Insufficient heating or cooling
 - Insufficient ventilation
 - Lead paint or pipes
 - Mold
 - Pests (eg, bugs) or rodents
 - Smoke detectors not working or unavailable
 - Food insecurity, as indicated by **1 or more** of the following(5):
 - In the past year, individual or caregiver ran out of food and did not have money to buy more food.
 - In the past year, individual or caregiver worried that they would run out of food before they received money to buy more food.
 - Insufficient transportation, as indicated by **1 or more** of the following(6):
 - In the past year, individual or caregiver missed medical appointments or could not get medications due to lack of transportation.
 - In the past year, individual or caregiver missed nonmedical activities, work, or could not get things needed for daily living due to lack of transportation.
 - Insufficient utilities, as indicated by **1 or more** of the following(7):
 - Utilities (eg, electricity, water, gas, or oil) are currently shut off or unavailable.
 - In the past year, electric, water, gas, or oil company threatened to shut off services.
 - Personal safety risk, as indicated by **2 or more** of the following(5):
 - Individual is sometimes or frequently physically hurt by another person (including family member).
 - Individual is sometimes or frequently insulted or talked down to by another person (including family member).
 - Individual is sometimes or frequently threatened with physical harm by another person (including family member).
 - Individual is sometimes or frequently screamed or cursed at by another person (including family member).
 - Insufficient dependent care, as indicated by **1 or more** of the following:
 - In the past year, individual or caregiver was unable to work due to lack of dependent care.
 - In the past year, individual or caregiver was unable to work more (additional) hours due to lack of dependent care.
 - In the past year, individual or caregiver missed medical appointments or could not get medications due to lack of dependent care.
 - In the past year, individual or caregiver missed nonmedical activities (eg, school, church, social activity) due to lack of dependent care.
 - Depression risk, as indicated by **ALL** of the following(8):
 - In the past 2 weeks, individual had little interest or pleasure in normal activities on at least several days.
 - In the past 2 weeks, individual felt down, depressed, or hopeless on at least several days.

References

1. Scanlon A, Reinisch C. Social determinants of health. In: Harding MM, Kwong J, Hagler D, Reinisch C, editors. Lewis's Medical-Surgical Nursing: Assessment and Management of Clinical Problems. 12th ed. St. Louis, MO: Mosby; 2023:18-20.
2. Billioux A, Verlander K, Anthony S, Alley D. Standardized Screening for Health-Related Social Needs in Clinical Settings: the Accountable Health Communities Screening Tool. [Internet] National Academy of Sciences. 2017 May Accessed at: <https://nam.edu/>. [accessed 2025 Sep 12]
3. Addressing social determinants of health. In: Perez R, editor. CMSA's Integrated Case Management. 2nd ed. Springer Publishing Company LLC; 2023:62-75.
4. Sandel M, et al. Unstable housing and caregiver and child health in renter families. Pediatrics 2018;14(2):e20172199. DOI: 10.1542/peds.2017-2199.
5. Children's HealthWatch Survey. Screening Instrument [Internet] Children's HealthWatch. 2024 Feb 13 Accessed at: <https://childrenshealthwatch.org/>. [accessed 2025 Mar 31]
6. PRAPARE®: Protocol for Responding to and Assessing Patient Assets, Risks, and Experiences Screening Tool. 2.0 [Internet] Association of Asian Pacific Community Health Organizations (AAPCHO) and National Association of Community Health Centers (NACHC). 2025 Accessed at: <https://prapare.org/the-prapare-screening-tool/>. [accessed 2025 Sep 08]
7. Cook JT, et al. A brief indicator of household energy security: associations with food security, child health, and child development in US infants and toddlers. Pediatrics 2008;122(4):e867-75. DOI: 10.1542/peds.2008-0286.
8. Kroenke K, Spitzer RL, Williams JB. The Patient Health Questionnaire-2: validity of a two-item depression screener. Medical Care 2003;41(11):1284-92. DOI: 10.1097/01.MLR.0000093487.78664.3C.

Tachycardia

- Tachycardia,[A][B] as indicated by **1 or more** of the following:
 - Heart rate greater than 100 beats per minute in adult[A][B](1)
 - Heart rate greater than 85 beats per minute in child 13 to 17 years of age[A][C](2)
 - Heart rate greater than 95 beats per minute in child 6 to 12 years of age[A][C](2)
 - Heart rate greater than 110 beats per minute in child 1 to 5 years of age[A][C](2)
 - Heart rate greater than 120 beats per minute in infant 3 to 11 months of age[A][C](2)
 - Heart rate greater than 150 beats per minute in infant 1 or 2 months of age[A][C](2)

References

1. Schriger DL. Approach to the patient with abnormal vital signs. In: Goldman L, Cooney KA, editors. Goldman-Cecil Medicine. 27th ed. Elsevier; 2024:32-35.
2. Anderson CC, Kapoor S, Mark TE. Pediatric parameters and equipment. In: Anderson CC, Kapoor S, Mark TE, editors. The Harriet Lane Handbook: A Manual for Pediatric House Officers. 23rd ed. Elsevier; 2024:i-iii.

Footnotes

- A. Criteria based upon clinician acquired numeric values (eg, vital signs, oxygen saturation) should be used if they are accurate reflections of the patient's condition. Transitory findings (eg, abnormal only upon initial emergency department intake or only one time out of multiple readings) that rapidly improve with no or minimal treatment usually do not reflect disease severity or risk for deterioration. This does not imply that an initial or one-time reading cannot ever be applicable. The goal is to separate erroneous or incidental findings from those that truly represent the patient's clinical picture.
- B. Interpretation of heart rate requires clinical judgment and consideration of several patient-specific factors, such as the patient's baseline heart rate, medications, and clinical impact. For example, an elderly patient on a beta-blocker medication with a baseline resting heart rate of 60 beats per minute may be clinically tachycardic at a heart rate of 94 beats per minute. Likewise, a patient who is upset, in pain, or nervous in the emergency department with a heart rate of 106 beats per minute may meet the technical definition of tachycardia, but this tachycardia (absent associated findings such as chest pain or hypotension) may not

be clinically important. The numeric values included in this definition are provided to allow for consistency in terms of a technical definition of the term tachycardia. Whether a heart rate above or below the technical threshold is clinically meaningful is a matter of persistence, context, and clinical judgment.

- C. Interpretation of heart rate requires clinical judgment and consideration of several patient-specific factors, such as the patient's baseline heart rate, medications, and clinical impact. A patient who is upset, in pain, or nervous in the emergency department with an elevated heart rate may meet the technical definition of tachycardia, but this tachycardia (absent associated findings such as hypotension) may not be clinically important. The numeric values included in this definition are provided to allow for consistency in terms of a technical definition of the term tachycardia. Whether a heart rate above or below the technical threshold is clinically meaningful is a matter of persistence, context, and clinical judgment.

Temperature status acceptable

- Temperature status acceptable, as indicated by **1 or more** of the following(1)(2)(3):
 - Temperature less than 100.5 degrees F (38.1 degrees C) (oral) and greater than 96.8 degrees F (36 degrees C) (rectal)
 - Temperature as expected for disease process and appropriate for management at next level of care

References

1. Nield LS, Kamat D. Fever. In: Kliegman RM, et al., editors. Nelson Textbook of Pediatrics. 22nd ed. Elsevier; 2025:1640-1642.
2. Melia MT. Approach to fever or suspected infection in the normal host. In: Goldman L, Cooney KA, editors. Goldman-Cecil Medicine. 27th ed. Elsevier; 2024:1845-1851.
3. Sifri CD. Approach to fever and suspected infection in the immunocompromised host. In: Goldman L, Cooney KA, editors. Goldman-Cecil Medicine. 27th ed. Elsevier; 2024:1851-1862.

Wound and ulcer problems absent or status acceptable

- Wound and ulcer problems absent or status acceptable, as indicated by **1 or more** of the following(1)(2)(3)(4)(5)(6)(7)(8)(9):
 - No wound or ulcer
 - Status acceptable, as indicated by **ALL** of the following:
 - Wound redness, drainage, swelling, and tenderness absent or diminished
 - Purulence and tissue breakdown absent or diminished
 - Fistulae or undermining absent or treated
 - No new wound dehiscence or hematoma
 - Tissue necrosis absent or treatment plan appropriate for next level of care
 - Some evidence of wound healing

References

1. Wolf SE. Burns. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL, editors. Sabiston Textbook of Surgery. 21st ed. Elsevier; 2022:484-505.
2. Padilla PL, Khoo KH, Ho T, Cole EL, Sirvent RZ, Phillips LG. Plastic surgery. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL, editors. Sabiston Textbook of Surgery. 21st ed. Elsevier; 2022:1916-1944.
3. Bettin CC. Diabetic foot. In: Azar FM, Beaty JH, editors. Campbell's Operative Orthopaedics. 14th ed. Philadelphia, PA: Elsevier; 2021:4314-4344.e4.
4. Senneville E, et al. IWGDF/IDSA guidelines on the diagnosis and treatment of diabetes-related foot infections (IWGDF/IDSA 2023). Clinical Infectious Diseases [Internet] 2023 Oct Accessed at: <https://www.idsociety.org/practice-guideline/diabetic-foot-infections/>. [accessed 2025 Sep 03] DOI: 10.1093/cid/ciad527.
5. Tan SM, Walker WC. Prevention and management of chronic wounds. In: Cifu DX, Lew HL, editors. Braddom's Rehabilitation Care: A Clinical Handbook. 2nd ed. Elsevier; 2025:227-234.

6. Liao N. Wound care basics. In: Gershel JC, Rauch DA, editors. Caring for the Hospitalized Child: A Handbook of Inpatient Pediatrics. 3rd ed. Elk Grove Village, IL: American Academy of Pediatrics; 2023:829-837.
7. Vance H. Wound care. In: Gonzalez-Fernandez M, Schaaf S, Zumsteg JM, Perret D, Kennedy DJ, editors. Handbook of Physical Medicine and Rehabilitation. Springer Publishing Company; 2022:469-480.
8. Nix DP, Bryant RA. Pressure ulcers/injuries. In: Bryant RA, Nix DP, editors. Acute & Chronic Wounds: Intraprofessionals from Novice to Expert. 6th ed. Elsevier; 2024:213-257.
9. Braza DW, Yacub Martin JN. Diabetic foot and peripheral arterial disease. In: Frontera WR, Silver JK, Rizzo TD Jr, editors. Essentials of Physical Medicine and Rehabilitation: Musculoskeletal Disorders, Pain, and Rehabilitation. 4th ed. Philadelphia, PA: Elsevier Saunders; 2019:719-723.

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