

Lumbar Discectomy, Foraminotomy, or Laminotomy

ORG: S-810 (ISC)
Link to Codes

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Care Planning - Inpatient Admission and Alternatives

Clinical Indications for Procedure

- Procedure is indicated for **1 or more** of the following: **NNN**
 - Cauda equina or spinal cord compression (myelopathy), as indicated by **ALL** of the following:
 - Progressive or severe neurologic deficits consistent with cauda equina or spinal cord compression, including **1 or more** of the following:
 - Bowel dysfunction(1)(4)(6)
 - Bladder dysfunction (eg, incontinence or urinary retention)(1)(4)(6)
 - Saddle anesthesia(1)(4)(6)
 - Bilateral lower extremity neurologic abnormalities(1)(4)(6)
 - New decrease in rectal tone or sacral reflexes(1)(4)
 - MRI or other neuroimaging finding correlates with clinical signs and symptoms.(1)(3)(4)
 - Lumbar radiculopathy and **ALL** of the following:
 - Significant (eg, impacts activities or sleep) unremitting radicular pain or progressive weakness due to nerve root compression(1)(3)(7)(8)
 - Failure of 6 weeks of nonoperative therapy that includes **1 or more** of the following(1)(8):
 - Medication (eg, NSAIDs, nortriptyline, gabapentin, muscle relaxants)(1)(3)
 - Physical therapy(1)(3)
 - Epidural or oral corticosteroids(1)(3)(9)(10)
 - MRI or other neuroimaging finding correlates with clinical signs and symptoms.(1)(3)
 - Lumbar spondylolisthesis, as indicated by **1 or more** of the following:
 - Rapidly progressive or very severe neurologic deficits (eg, bowel or bladder dysfunction)(1)
 - Symptoms requiring treatment, as indicated by **ALL** of the following:
 - Patient has persistent disabling symptoms, including **1 or more** of the following(1):
 - Low back pain(1)(5)(11)(12)
 - Neurogenic claudication(1)(5)(11)(12)

- Radicular pain(1)(5)(11)(12)
- Treatment is indicated by **ALL** of the following:
 - Listhesis demonstrated on imaging(1)(5)(12)
 - Symptoms correlate with findings on MRI or other imaging.(1)(5)(12)
 - Failure of 3 months of nonoperative therapy(1)(5)(12)

Alternatives to Procedure

- Alternatives include:^[N]
 - Nonoperative measures, including:
 - Medication (eg, NSAIDs, analgesics)(1)(3)
 - Physical therapy(1)(3)(13)
 - Epidural or oral corticosteroid (eg, for disk herniation)(1)(3)(10)(14)
 - Laminectomy. See Lumbar Laminectomy ^[C] ISC guideline.(1)(3)(12)

Operative Status Criteria

Goal Length of Stay: Ambulatory

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, MCG's ambulatory Goal Length of Stay (GLOS) attainment calculation reports the sum of same-day and next-day postoperative discharges. Depending on various patient and procedural factors, some patients undergoing a procedure with an ambulatory GLOS require inpatient care (eg, medical necessity for hospital-based care across 2 or more postoperative midnights). Some of these factors are described in the Extended Stay section of this guideline.

- Ambulatory
- Inpatient (eg, medical necessity for hospital-based care across 2 or more postoperative midnights)
- Inpatient (Medicare patient, and specific procedure is on CMS Inpatient Only List)

Hospitalization

Optimal Recovery Course

Day	Level of Care	Clinical Status	Activity	Routes	Interventions	Medications
1	<ul style="list-style-type: none"> • Social Determinants of Health Assessment • OR to floor to discharge^[A] • Discharge planning 	<ul style="list-style-type: none"> • Hemodynamic stability • No new neurologic deficits • No new voiding difficulty • No evidence of infection • Pain absent or managed • Discharge plans and education understood 	<ul style="list-style-type: none"> • Ambulatory or acceptable for next level of care 	<ul style="list-style-type: none"> • IV fluids and medications for procedure • Oral hydration^[B] • Oral medications or regimen acceptable for next level of care • Oral diet or acceptable for next level of care 	<ul style="list-style-type: none"> • Neurologic checks of lower extremities 	<ul style="list-style-type: none"> • Prophylactic antibiotics^[C] • Oral analgesics

(1)(17)(18)(19)(20)^[N]

Recovery Milestones are indicated in **bold**.

Goal Length of Stay: Ambulatory

Note: Goal Length of Stay assumes optimal recovery, decision making, and care. Patients may be discharged to a lower level of care (either later than or sooner than the goal) when it is appropriate for their clinical status and care needs.

Extended Stay

Minimal (a few hours to 1 day), Brief (1 to 3 days), Moderate (4 to 7 days), and Prolonged (more than 7 days).

- Inpatient stay (eg, need for hospital-based care beyond postoperative day 1) may be needed for(21)(22):
 - Failure to meet discharge criteria (recovery milestones in Optimal Recovery Course)
 - Expect brief stay extension.
 - Patients with active comorbidities requiring longer postoperative care(21)
 - Expect brief stay extension.
 - Dural tear, cerebrospinal fluid leak(21)(23)(24)(25)
 - Anticipate possible cerebrospinal fluid drainage, surgical repair, and bed rest.
 - Expect brief to moderate stay extension.
 - Extrapapinal hemorrhage
 - Anticipate possible evacuation and surgical repair.
 - Expect brief to moderate stay extension.
 - Intraspinal hemorrhage
 - Intraspinal hemorrhage may require surgical repair.
 - Expect brief to moderate stay extension.
 - Nerve root injury(23)(26)
 - Nerve root injury may require physical therapy and rehabilitation.
 - Expect brief to moderate stay extension.

See Common Complications and Conditions [ISC](#) for further information.

Discharge

Discharge Planning

- Discharge planning includes[D]:
 - Assessment of needs and planning for care, including(28)(29):
 - Develop and modify treatment plan (involving multiple providers) as needed.
 - Evaluate and address preadmission functioning as needed.
 - Evaluate and address psychosocial status issues as indicated. See Psychosocial Assessment [SR](#) for further information.
 - Evaluate and address social determinants of health (eg, housing, food). See Social Determinants of Health Screening Tool [SR](#) for further information.
 - Evaluate and address patient or caregiver preferences as indicated.
 - Identify skilled services needed at next level of care, with specific attention to(30):
 - Neurologic status assessment(31)
 - Pain management(31)(32)
 - Wound or dressing management
 - Early identification of anticipated discharge destination; options include(29)(33):
 - Home; considerations include:
 - Home safety assessment. See Home Safety Assessment [SR](#) for further information.
 - Patient safe to go home; examples include(34)(35)(36):
 - Medical status stable for patient's condition
 - Functional care can safely be provided with available resources.
 - Mental status stable for patient's condition
 - Medication availability confirmed and reconciliation complete
 - Patient/caregiver education completed with written discharge instructions provided
 - Community resources identified and referrals made, as needed
 - Home care arranged, if indicated
 - Necessary medical equipment delivery arranged or available in home, if indicated
 - Necessary medical supplies ordered, or patient/caregiver can obtain, if indicated
 - Access to follow-up care
 - Self-management ability if appropriate. See Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL) Assessment [SR](#) for further information.
 - Caregiver need, ability, and availability
 - Post-acute skilled care or custodial care as indicated. See Discharge Planning Tool [SR](#) for further information.
 - Transitions of care plan complete, including(29)(33)(37):
 - Patient and caregiver education complete.
 - See Teach-Back Tool [SR](#) for further information.

- See Lumbar Discectomy, Foraminotomy, or Laminotomy: Patient Education for Clinicians [↗](#) SR for further information.
- ☐ Medication reconciliation completion includes(38)(39):
 - Compare patient's discharge list of medications (prescribed and over-the-counter) against provider's admission or transfer orders.
 - Assess each medication for correlation to disease state or medical condition.
 - Report medication discrepancies to prescribing provider, attending physician, and primary care provider, and ensure accurate medication order is identified.
 - Provide reconciled medication list to all treating providers.
 - Confirm that patient or caregiver can acquire medication.
 - Educate patient and caregiver.
 - Provide complete medication list to patient and caregiver.
 - Importance of presenting personal medication list to all providers at each care transition, including all provider appointments
 - Reason, dosage, and timing of medication (eg, use "teach-back" techniques)(40)
 - Encourage communication between patient, caregiver, and pharmacy for obtaining prescriptions, setting up home medication delivery, and reviewing for drug-drug interactions.
 - See Medication Reconciliation Tool [↗](#) SR for further information.
- Plan communicated to patient, caregiver, and all members of care team, including(41):
 - Inpatient care and service providers
 - Primary care provider
 - All post-discharge care and service providers
- Appointments planned or scheduled, which may include(31):
 - Primary care provider(42)
 - Neurosurgeon
 - Orthopedic surgeon
 - Rehabilitation therapy services(43)
 - Specialists for management of comorbidities as needed
 - Other
- Outpatient testing and procedure plans made, which may include:
 - Other
- Referrals made for assistance or support, which may include:
 - Financial, for follow-up care, medication, and transportation(44)
 - Tobacco use treatment(45)
 - Vocational rehabilitation(31)
 - Other
- Medical equipment and supplies coordinated (ie, delivered or delivery confirmed), which may include:
 - Ambulation devices (eg, cane, crutches, walker)(46)
 - Wound care equipment and supplies(47)
 - Other

Discharge Destination

- Post-hospital levels of admission may include:
 - Home.
 - Home healthcare. See Home Care Indications for Admission Section [↗](#) HC in Lumbar Spine Surgery guideline in Home Care.
 - Recovery facility care. See Recovery Facility Care Indications for Admission Section [↗](#) RFC in Lumbar Spine Surgery guideline in Recovery Facility Care.

Evidence Summary

Background

A discectomy is a surgical technique in which part or all of the disk between the vertebrae is removed. A foraminotomy is a surgical technique in which an opening is made by removing bone around the area of the spinal column where the spinal nerve roots exit from the spinal cord. A laminotomy involves the opening of bone from the posterior portion of the vertebral body.(1) **(EG 2)** Any of these surgical techniques may be achieved using an open approach or a minimally invasive approach, which involves a small incision through which a camera and surgical instruments are inserted with additional guidance from microscopic visualization, fluoroscopy, or electromagnetic navigation systems.(2) **(EG 2)**

Criteria

The evidence for the clinical indications found in this guideline includes 9 published peer reviewed articles, 1 Cochrane systematic review, and 2 book sections.

For cauda equina or spinal cord compression (myelopathy), an orthopedic surgery textbook and a narrative review support operative management for progressive or severe neurologic deficits, such as bowel or bladder dysfunction, saddle anesthesia, or bilateral lower extremity neurologic abnormalities.(1)(3) **(EG 2)** A narrative review states that patients with MRI findings and symptoms correlating with cauda equina syndrome should have a surgical decompression procedure within 48 hours of the onset of symptoms.(4) **(EG 2)**

For lumbar radiculopathy with unremitting radicular pain or progressive weakness secondary to nerve root compression, an orthopedic surgery textbook and a narrative review state that surgical therapy is appropriate if patients have failed at least 6 weeks of nonoperative therapy (eg, anti-inflammatory medications, physical therapy, epidural corticosteroids) and MRI findings have confirmed the level of involvement that correlates with the patient's signs and symptoms.(1)(3) **(EG 2)**

For lumbar spondylolisthesis, an orthopedic surgery textbook supports surgical intervention, such as discectomy, foraminotomy, or laminotomy, for patients with persistent disabling symptoms, corresponding imaging findings, and failure of 3 months of nonoperative therapy.(1)(5) **(EG 2)**

Alternatives

A randomized noninferiority trial compared lumbar decompression alone with lumbar decompression with instrumental fusion in 262 patients (mean age 66 years) with leg or back pain due to lumbar spinal stenosis and single-level spondylolisthesis of 3 mm or more that persisted despite nonoperative treatment (most patients with symptoms for more than 1 year), and concluded that there was noninferiority of decompression alone in patient-reported outcomes (eg, Oswestry Disability Index) at 2-year follow-up.(12) **(EG 1)** In the same trial, the decompression alone group had a slightly higher reoperation rate (12.5% vs 9.1%).(12) **(EG 1)**

Length of Stay

A study of 2262 patients (mean age 50 years) undergoing single-level or 2-level lumbar discectomy found that the average length of stay was 0.5 days.(19) **(EG 2)** Analysis of procedure data for a commercially insured population shows 93% of patients undergoing lumbar discectomy, foraminotomy, or laminotomy were discharged the day of or the day after surgery.(20) **(EG 3)** Analysis of procedure data for a Medicare-insured population shows 86% of patients undergoing lumbar discectomy, foraminotomy, or laminotomy were discharged the day of or the day after surgery.(20) **(EG 3)**

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(48); 42 CFR 419.22(49); 42 CFR 422.101(50)

Internet-Only Manual (IOM) Citations: CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 1 - Inpatient Hospital Services Covered Under Part A(51); CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 6 - Hospital Services Covered Under Part B(52); CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 15 - Covered Medical and Other Health Services(53); CMS IOM Publication 100-08, Medicare Program Integrity Manual, Chapter 6, Section 6.5 - Medical Review of Inpatient Hospital Claims for Part A Payment(54)

Medicare Coverage Determinations: Medicare Coverage Database(55)

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Footnotes

[A] For ambulatory operative status criteria patients, see *Ambulatory Surgery Discharge and Complications: Common Complications and Conditions*  as needed. [A in Context Link 1]

[B] Some patients may have their hydration needs met via alternative means (eg, percutaneous endoscopic gastrostomy tube). [B in Context Link 1]

[C] For a typical uncomplicated lumbar laminotomy and discectomy, a single preoperative dose of antibiotics is suggested to decrease the risk of infection and/or diskitis.(15)(16) [C in Context Link 1]

[D] Discharge instructions should be given in the patient's and caregiver's native language using trained language interpreters whenever possible.(27) [D in Context Link 1]

Definitions

Hemodynamic stability

- Hemodynamic stability, as indicated by **1 or more** of the following:
 - Hemodynamic abnormalities at baseline or acceptable for next level of care
 - Patient hemodynamically stable, as indicated by **ALL** of the following(1)(2):
 - Tachycardia absent
 - Hypotension absent
 - No evidence of inadequate perfusion (eg, no myocardial ischemia)
 - No other hemodynamic abnormalities (eg, no Orthostatic hypotension)

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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. Ramgopal S, Sepanski RJ, Martin-Gill C. Empirically derived age-based vital signs for children in the out-of-hospital setting. *Annals of Emergency Medicine* 2023;81(4):402-412. DOI: 10.1016/j.annemergmed.2022.09.019.

Hypotension absent

- Hypotension absent,^[A] as indicated by **1 or more** of the following:
 - Hypotension absent in adult patient, as indicated by **1 or more** of the following:
 - Systolic blood pressure greater than or equal to 90 mm Hg^{[A](1)}
 - Mean arterial pressure^[B] greater than or equal to 70 mm Hg  MAP Calculator^{[A](1)(2)}
 - Blood pressure at patient's baseline (eg, healthy adult with low systolic blood pressure), at intentional therapeutic goal (eg, patient with heart failure), or acceptable for next level of care (eg, blood pressure stable and no significant signs or symptoms due to low blood pressure)
 - Hypotension absent in pediatric patient, as indicated by **1 or more** of the following:
 - Systolic blood pressure greater than or equal to 110 mm Hg in child 13 to 17 years of age^{[A](3)}
 - Systolic blood pressure greater than or equal to 100 mm Hg in child 6 to 12 years of age^{[A](3)}
 - Systolic blood pressure greater than or equal to 95 mm Hg in child 3 to 5 years of age^{[A](3)}
 - Systolic blood pressure greater than or equal to 90 mm Hg in child 1 or 2 years of age^{[A](3)}
 - Systolic blood pressure greater than or equal to 80 mm Hg in infant 6 to 11 months of age^{[A](3)}
 - Systolic blood pressure greater than or equal to 70 mm Hg in infant 3 to 5 months of age^{[A](3)}
 - Systolic blood pressure greater than or equal to 65 mm Hg in infant 1 or 2 months of age^{[A](3)}
 - Blood pressure at patient's baseline (eg, healthy child with low systolic blood pressure), at intentional therapeutic goal, or acceptable for next level of care (eg, blood pressure stable and no significant signs or symptoms due to low blood pressure)

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.
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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. The mean arterial pressure (MAP) takes into account both SBP and DBP readings.

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.

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.

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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.
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Tachycardia absent

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

Codes

ICD-10 Diagnosis: C41.2, C79.51, D16.6, D48.0, D49.2, M46.25, M46.26, M46.27, M46.35, M46.36, M46.37, M46.45, M46.46, M46.47, M47.15, M47.16, M47.25, M47.26, M47.27, M47.815, M47.816, M47.817, M47.895, M47.896, M47.897, M48.05, M48.061, M48.062, M48.07, M51.05, M51.06, M51.15, M51.16, M51.17, M51.25, M51.26, M51.27, M51.35, M51.85, M54.15, M54.16, M54.17, M96.1, M99.23, M99.33, M99.43, M99.53, M99.63, M99.73, S33.0XXA, S34.101A, S34.102A, S34.103A, S34.104A, S34.105A, S34.109A, S34.111A, S34.112A, S34.113A, S34.114A, S34.115A, S34.119A, S34.121A, S34.122A, S34.123A, S34.124A, S34.125A, S34.129A, S34.21XA [Hide]

ICD-10 Procedure: 0RBB0ZZ, 0RBB3ZX, 0RBB3ZZ, 0RBB4ZX, 0RBB4ZZ, 0RTB0ZZ, 0SB20ZX, 0SB20ZZ, 0SB23ZX, 0SB23ZZ, 0SB24ZX, 0SB24ZZ, 0SB40ZX, 0SB40ZZ, 0SB43ZX, 0SB43ZZ, 0SB44ZX, 0SB44ZZ, 0ST20ZZ, 0ST40ZZ [Hide]

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HCPCS: S2350, S2351

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