

Head and Neck Surgery or Procedure GRG

GRG: SG-HNS (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 other procedure covered by this guideline is indicated for **1 or more** of the following:
 - ☐ Eye disease surgery needed, as indicated by **1 or more** of the following(1):
 - Cataract(2)(3)
 - Glaucoma(4)(5)(6)
 - Corneal lesion(7)(8)
 - Other ophthalmologic pathology

- Eye trauma surgery needed (eg, laceration, lens repair, cornea repair)(1)(9)
- ☐ Ear surgery needed, as indicated by **1 or more** of the following:
 - Drainage of external ear or auditory canal (eg, abscess, hematoma)(10)(11)
 - Debridement or resection due to infection (eg, acute otitis externa, infection of the auricular cartilage, cholesteatoma, petrositis, mastoiditis, abscesses of temporal bone)(12)(13)(14)(15)(16)(17)
 - Removal of canal debris (eg, epithelial debris, foreign body removal)(12)(17)
 - Reconstruction of external ear needed (eg, trauma, microtia)(18)(19)
 - Tympanoplasty or myringoplasty needed (eg, medial canal fibrosis, perforation of the tympanic membrane, cholesteatoma, tympanosclerotic plaques)(12)(17)(20)(21)
 - Myringotomy needed, with or without tympanostomy (eg, otitis media, persistent middle ear effusion)(13)(22)
 - Mastoidectomy needed (eg, cholesteatoma, Meniere disease, chronic suppurative otitis media)(20)(23)
 - Ossiculoplasty needed (eg, tympanosclerosis, ossicular necrosis, ossicular dislocation)(21)
 - Labyrinthectomy needed (eg, Meniere disease, refractory or recurrent benign paroxysmal positional vertigo)(24)
 - Balloon dilatation of the eustachian tube needed (eg, obstructive eustachian tube dysfunction)(25)(26)
 - Tympanostomy tube removal for retained tubes[A](13)
 - Revision ear surgery necessary (eg, tympanostomy tube blockage, early extrusion of tympanostomy)(13)
 - Other ear surgery needed
- ☐ Reconstruction procedure needed for eye, head, or neck abnormalities, as indicated by **1 or more** of the following(27):
 - Cleft palate or lip(28)(29)
 - Orbital deformities(30)
 - Maxillofacial deformities(31)
 - Eye muscle palsy(32)
 - Congenital atresias, cysts, or sinus remnants(33)(34)(35)(36)
 - HIV-associated facial lipoatrophy(15)
 - Other pathology of eye, head, or neck
- ☐ Biopsy or resection procedure needed, as indicated by **1 or more** of the following(15)(37):
 - Skull mass
 - Neck mass (eg, cervical lymph node mass)(27)(38)(39)
 - Nasal cavity or sinus tumor (eg, maxillary mass, ethmoid mass)(27)(38)
 - Salivary neoplasm(15)(27)
 - Oropharyngeal mass (eg, lip mass, tongue mass, hard palate lesion)(27)(38)
 - Skin mass or lesion (eg, face, neck)(15)
 - Laryngeal lesions or masses(27)(40)(41)
 - Thyroid mass(27)
 - Tumors of the ear or temporal bone(27)
 - Other mass or lesion
- Operation for hearing loss needed (eg, cochlear implant)(42)(43)(44)
- Tonsillectomy or adenoidectomy needed(45)(46)(47)(48)
- ☐ Drainage or debridement procedure needed, as indicated by **1 or more** of the following(12)(46)(49)(50)(51):
 - Abscess (eg, peritonsillar abscess, retropharyngeal abscess)(52)(53)
 - Sinusitis(15)(54)(55)
 - Osteomyelitis(15)

- Other head and neck pathology requiring drainage or debridement
- ☐ Head and neck trauma surgery needed, as indicated by **1 or more** of the following(27)(56)(57)(58)(59)(60):
 - Fractures(61)
 - Lacerations
 - Laryngeal or tracheal injury(62)
 - Other traumatic injury of head or neck(62)
- Epistaxis control procedure needed (eg, arterial ligation, endovascular embolization, repair of vascular malformation)(63)(64)(65)(66)(67)
- Vocal cord or related structure operation needed (eg, polyps, vocal cord paralysis)(68)(69)(70)(71)
- Salivary or parotid gland resection needed for refractory sialolithiasis(72)(73)
- Foreign body removal (eg, aspiration)(74)
- Surgical procedure needed for sleep apnea (eg, palatal, nasal, maxillomandibular advancement, supraglottoplasty)(75)(76)(77)(78)(79)
- Laryngeal stenosis requiring treatment (eg balloon dilation, endoscopic management, laryngeal resection)(80)(81)
- Dental procedure needed(82)(83)
- ☐ Tracheostomy procedure needed, as indicated by **1 or more** of the following(84)(85):
 - Tracheostomy creation
 - Tracheostomy repair
 - Surgery for complications(86)

Alternatives to Procedure

- Alternatives may include:
 - Medical treatment for eye, ear, nose, and throat diseases; examples include(1):
 - Medications for glaucoma(4)(5)(6)
 - Anti-vascular endothelial growth factor medications for diabetic retinopathy(87)
 - Local treatment for corneal disease(7)(8)(88)
 - Antimicrobials for ocular infection, sinusitis, or otitis(7)(8)(14)(88)(89)(90)
 - Nonsurgical treatment for obstructive sleep apnea(75)(76)
 - Speech and swallow therapy (eg, for vocal cord paralysis)
 - Injection laryngoplasty for vocal cord paralysis(91)
 - Anti-inflammatory medications for ocular disease
 - Retrobulbar injections of alcohol or chlorpromazine for blind painful eye
 - Needle aspiration of tonsillar or peritonsillar abscess(92)
 - Outpatient epistaxis control (eg, anterior cauterization or packing)(64)(89)
 - Radiation or chemotherapy for neoplasms(27)(38)
 - Conservative care for hearing loss or craniofacial deformities
 - Office-based treatment for most dental problems
 - Extracorporeal shock wave lithotripsy for parotid gland calculi or sialolithiasis(73)
 - Outpatient cochlear implantation(93)
 - Palliative care as appropriate

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	• OR to ICU or intermediate care[B] • Social Determinants of Health Assessment • Discharge planning. See Discharge Planning Tool  SR.	• Clinical Indications met[C] • Procedure completed	• 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	• Hemodynamic stability • Operative site and other wounds acceptable • Pain and nausea absent or adequately managed • Temperature status acceptable • No infection, or status acceptable • Ocular status acceptable • Orbital edema or inflammation absent or controlled • Airway and swallowing status acceptable • General Discharge Criteria met	• Intake acceptable • No inpatient interventions needed

(2)(7)(8)(49)(75)(76)(88)

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:
 - ☐ 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(94)(95):
 - Tachycardia absent
 - Hypotension absent
 - No evidence of inadequate perfusion (eg, no myocardial ischemia)
 - No other hemodynamic abnormalities (eg, no Orthostatic hypotension)
 - ☐ Operative site and other wounds acceptable, as indicated by **1 or more** of the following(96):
 - Wounds absent
 - Wound site clean and intact, with minimal to no drainage and without signs of infection
 - Current wound care performable at next level of care
 - ☐ Pain and nausea absent or adequately managed, as indicated by **1 or more** of the following(97)(98)(99)(100)(101):
 - No pain or nausea
 - Minimal discomfort on oral medications
 - Pain and nausea managed on regimen performable at next level of care
 - ☐ Temperature status acceptable, as indicated by **1 or more** of the following(102)(103)(104):
 - 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(103)(104)(105)(106)(107):
 - No infection present
 - Infection status acceptable for next level of care, as indicated by **ALL** of the following(108):
 - 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
 - ☐ Ocular status acceptable, as indicated by **1 or more** of the following:
 - No ocular problems
 - Ocular status acceptable for next level of care, as indicated by **ALL** of the following(1)(109):
 - Ocular abnormalities (eg, hemorrhage, orbital fracture) acceptable for management at next level of care
 - Intraocular pressure less than 21 mm Hg or acceptable for management at next level of care(110)
 - Orbital edema or inflammation absent or controlled
 - ☐ Airway and swallowing status acceptable, as indicated by **ALL** of the following:
 - Aspiration absent or manageable at next level of care(111)(112)
 - No stridor, or at anticipated baseline

- Tracheostomy absent or functioning adequately for next level of care(113)
- Posterior nasal packs absent(67)
- ☐ 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(114):
 - Oral hydration, medications, and diet
 - Enteral hydration, medications, and diet
 - Administration routes performable at next level of care
- ☐ No inpatient interventions needed; examples include:
 - Urgent laryngoscopy
 - Monitoring for stridor or other airway difficulties
 - Wound care needed not feasible at next level of care
 - Surgery for hemorrhage or other procedural complications
 - Drain care requiring continuing observation and care that cannot be managed at 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.

Evidence Summary

Criteria

The evidence for the clinical indications found in this guideline includes 39 published peer reviewed articles, 6 specialty society or other evidence-based guidelines, 1 Cochrane systematic review, and 39 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(115); 42 CFR 419.22(116); 42 CFR 422.101(117)

Internet-Only Manual (IOM) Citations: CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 1 - Inpatient Hospital Services Covered Under Part A(118); CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 6 - Hospital Services Covered Under Part B(119); CMS IOM Publication 100-02, Medicare Benefit Policy Manual, Chapter 15 - Covered Medical and Other Health Services(120); CMS IOM Publication 100-08, Medicare Program Integrity Manual, Chapter 6, Section 6.5 - Medical Review of Inpatient Hospital Claims for Part A Payment(121)

Medicare Coverage Determinations: Medicare Coverage Database(122)

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Footnotes

[A] Most tympanostomy tubes extrude spontaneously and do not require surgical removal. While there is no clear consensus on when to remove tubes that have failed to extrude, many clinicians recommend removal of retained tubes after 3 years to reduce the risk of perforation.(13) [A in Context Link 1]

[B] See Intensive, Intermediate, and Telemetry Care Guidelines  ISC. [B in Context Link 1]

[C] See Clinical Indications for Procedure in this guideline. [C 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

Airway and swallowing status acceptable

- Airway and swallowing status acceptable, as indicated by **ALL** of the following:
 - Aspiration absent or manageable at next level of care(1)(2)
 - No stridor, or at anticipated baseline
 - Tracheostomy absent or functioning adequately for next level of care(3)
 - Posterior nasal packs absent(4)

References

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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 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)

References

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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

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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.

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

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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:
 - Urgent laryngoscopy
 - Monitoring for stridor or other airway difficulties
 - Wound care needed not feasible at next level of care
 - Surgery for hemorrhage or other procedural complications
 - Drain care requiring continuing observation and care that cannot be managed at next level of care

Ocular status acceptable

- Ocular status acceptable, as indicated by **1 or more** of the following:
 - No ocular problems
 - Ocular status acceptable for next level of care, as indicated by **ALL** of the following(1)(2):
 - Ocular abnormalities (eg, hemorrhage, orbital fracture) acceptable for management at next level of care
 - Intraocular pressure less than 21 mm Hg or acceptable for management at next level of care(3)

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Operative site and other wounds acceptable

- Operative site and other wounds acceptable, as indicated by **1 or more** of the following(1):
 - Wounds absent
 - Wound site clean and intact, with minimal to no drainage and without signs of infection
 - Current wound care performable at next level of care

References

1. Yepuri N, Pruekprasert N, Cooney RN. Surgical complications. In: Townsend CM, Beauchamp RD, Evers BM, Mattox KL, editors. Sabiston Textbook of Surgery. 21st ed. Elsevier; 2022:238-283.

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

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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

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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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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)

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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.

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

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MCG Health
General Recovery Care 30th Edition
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Last Update: 1/25/2026 12:49:23 AM
Build Number: 30.0.2026012500524.025256