



Status: Created/Updated

Effective Date: 09/01/2023

Doc ID: PAC01-0923.1-U0124

Last Review Date: 04/12/2023

Approval and implementation dates for specific health plans may vary. Please consult the applicable health plan for more details.

Clinical Appropriateness Guidelines

Post-Acute Care (PAC)

Appropriate Use Criteria: Level of Care – Skilled Nursing Facility (SNF)

Proprietary

© 2024 Carelon Medical Benefits Management, Inc. All rights reserved.

Table of Contents

Description and Application of the Guidelines	3
General Clinical Guideline	4
Clinical Appropriateness Framework	4
Simultaneous Ordering of Multiple Diagnostic or Therapeutic Interventions	4
Repeat Diagnostic Intervention	4
Repeat Therapeutic Intervention	5
Post-Acute Care – Skilled Nursing Facility	6
General Information	6
Abbreviations.....	6
Guideline Scope	6
Definitions	6
Clinical Indications	7
General PAC principles	7
General Criteria for Admission to SNF	7
Initial SNF Care	8
Ongoing Skilled Nursing Facility Care	8
Basic Criteria for Continuation of SNF-Based PAC	8
Level of Ongoing Facility-Based PAC	9
Exclusions.....	10
References	10
History	13

Description and Application of the Guidelines

The Carelon Clinical Appropriateness Guidelines (hereinafter “the Carelon Clinical Appropriateness Guidelines” or the “Guidelines”) are designed to assist providers in making the most appropriate treatment decision for a specific clinical condition for an individual. The Guidelines establish objective and evidence-based criteria for medical necessity determinations, where possible, that can be used in support of the following:

- To establish criteria for when services are medically necessary
- To assist the practitioner as an educational tool
- To encourage standardization of medical practice patterns
- To curtail the performance of inappropriate and/or duplicate services
- To address patient safety concerns
- To enhance the quality of health care
- To promote the most efficient and cost-effective use of services

The Carelon guideline development process complies with applicable accreditation and legal standards, including the requirement that the Guidelines be developed with involvement from appropriate providers with current clinical expertise relevant to the Guidelines under review and be based on the most up-to-date clinical principles and best practices. Resources reviewed include widely used treatment guidelines, randomized controlled trials or prospective cohort studies, and large systematic reviews or meta-analyses. Carelon reviews all of its Guidelines at least annually.

Carelon makes its Guidelines publicly available on its website. Copies of the Guidelines are also available upon oral or written request. Additional details, such as summaries of evidence, a list of the sources of evidence, and an explanation of the rationale that supports the adoption of the Guidelines, are included in each guideline document.

Although the Guidelines are publicly available, Carelon considers the Guidelines to be important, proprietary information of Carelon, which cannot be sold, assigned, leased, licensed, reproduced or distributed without the written consent of Carelon.

Carelon applies objective and evidence-based criteria, and takes individual circumstances and the local delivery system into account when determining the medical appropriateness of health care services. The Carelon Guidelines are just guidelines for the provision of specialty health services. These criteria are designed to guide both providers and reviewers to the most appropriate services based on a patient’s unique circumstances. In all cases, clinical judgment consistent with the standards of good medical practice should be used when applying the Guidelines. Guideline determinations are made based on the information provided at the time of the request. It is expected that medical necessity decisions may change as new information is provided or based on unique aspects of the patient’s condition. The treating clinician has final authority and responsibility for treatment decisions regarding the care of the patient and for justifying and demonstrating the existence of medical necessity for the requested service. The Guidelines are not a substitute for the experience and judgment of a physician or other health care professionals. Any clinician seeking to apply or consult the Guidelines is expected to use independent medical judgment in the context of individual clinical circumstances to determine any patient’s care or treatment.

The Guidelines do not address coverage, benefit or other plan specific issues. Applicable federal and state coverage mandates take precedence over these clinical guidelines, and in the case of reviews for Medicare Advantage Plans, the Guidelines are only applied where there are not fully established CMS criteria. If requested by a health plan, Carelon will review requests based on health plan medical policy/guidelines in lieu of the Carelon Guidelines. Pharmaceuticals, radiotracers, or medical devices used in any of the diagnostic or therapeutic interventions listed in the Guidelines must be FDA approved or conditionally approved for the intended use. However, use of an FDA approved or conditionally approved product does not constitute medical necessity or guarantee reimbursement by the respective health plan.

The Guidelines may also be used by the health plan or by Carelon for purposes of provider education, or to review the medical necessity of services by any provider who has been notified of the need for medical necessity review, due to billing practices or claims that are not consistent with other providers in terms of frequency or some other manner.

General Clinical Guideline

Clinical Appropriateness Framework

Critical to any finding of clinical appropriateness under the guidelines for a specific diagnostic or therapeutic intervention are the following elements:

- Prior to any intervention, it is essential that the clinician confirm the diagnosis or establish its pretest likelihood based on a complete evaluation of the patient. This includes a history and physical examination and, where applicable, a review of relevant laboratory studies, diagnostic testing, and response to prior therapeutic intervention.
- The anticipated benefit of the recommended intervention is likely to outweigh any potential harms, including from delay or decreased access to services that may result (net benefit).
- Widely used treatment guidelines and/or current clinical literature and/or standards of medical practice should support that the recommended intervention offers the greatest net benefit among competing alternatives.
- There exists a reasonable likelihood that the intervention will change management and/or lead to an improved outcome for the patient.

Providers may be required to submit clinical documentation in support of a request for services. Such documentation must a) accurately reflect the clinical situation at the time of the requested service, and b) sufficiently document the ordering provider's clinical intent.

If these elements are not established with respect to a given request, the determination of appropriateness will most likely require a peer-to-peer conversation to understand the individual and unique facts that would justify a finding of clinical appropriateness. During the peer-to-peer conversation, factors such as patient acuity and setting of service may also be taken into account to the extent permitted by law.

Simultaneous Ordering of Multiple Diagnostic or Therapeutic Interventions

Requests for multiple diagnostic or therapeutic interventions at the same time will often require a peer-to-peer conversation to understand the individual circumstances that support the medical necessity of performing all interventions simultaneously. This is based on the fact that appropriateness of additional intervention is often dependent on the outcome of the initial intervention.

Additionally, either of the following may apply:

- Current literature and/or standards of medical practice support that one of the requested diagnostic or therapeutic interventions is more appropriate in the clinical situation presented; or
- One of the diagnostic or therapeutic interventions requested is more likely to improve patient outcomes based on current literature and/or standards of medical practice.

Repeat Diagnostic Intervention

In general, repeated testing of the same anatomic location for the same indication should be limited to evaluation following an intervention, or when there is a change in clinical status such that additional testing is required to determine next steps in management. At times, it may be necessary to repeat a test using different techniques or protocols to clarify a finding or result of the original study.

Repeated testing for the same indication using the same or similar technology may be subject to additional review or require peer-to-peer conversation in the following scenarios:

- Repeated diagnostic testing at the same facility due to technical issues
- Repeated diagnostic testing requested at a different facility due to provider preference or quality concerns

- Repeated diagnostic testing of the same anatomic area based on persistent symptoms with no clinical change, treatment, or intervention since the previous study
- Repeated diagnostic testing of the same anatomic area by different providers for the same member over a short period of time

Repeat Therapeutic Intervention

In general, repeated therapeutic intervention in the same anatomic area is considered appropriate when the prior intervention proved effective or beneficial and the expected duration of relief has lapsed. A repeat intervention requested prior to the expected duration of relief is not appropriate unless it can be confirmed that the prior intervention was never administered. Requests for on-going services may depend on completion of previously authorized services in situations where a patient's response to authorized services is relevant to a determination of clinical appropriateness.

Post-Acute Care – Skilled Nursing Facility

General Information

Abbreviations

- Activities of Daily Living (ADL)
- Americans with Disabilities Act (ADA)
- Bilevel Positive Airway Pressure Machine (BIPAP)
- Centers for Medicare & Medicaid Services (CMS)
- Cerebrovascular Accident (CVA)
- Continuous Positive Airway Pressure Machine (CPAP)
- Durable Medical Equipment (DME)
- Health-Related Social Needs (HRSN)
- Hemodialysis (HD)
- Inpatient Rehabilitation Facility (IRF)
- Left Ventricular Assist Device (LVAD)
- Level of Care (LOC)
- Long Term Acute Care Hospital (LTACH)
- Occupational Therapy (OT)
- Percutaneous Endoscopic Gastrostomy Tube (PEG)
- Physical Therapy (PT)
- Post-Acute Care (PAC)
- Skilled Nursing Facility (SNF)
- Speech Language Pathology (SLP)
- Traumatic Brain Injury (TBI)

Guideline Scope

This guideline addresses post-acute care (PAC). The criteria below establish the appropriate level of PAC at hospital discharge or upon admission from home. The criteria also establish the appropriateness of continuing care. Specifically, these criteria establish whether a patient can receive care at home or whether a higher level of care is needed. If a higher level of care is appropriate, these criteria determine the most appropriate setting in which to deliver that care: skilled nursing facility, acute inpatient rehabilitation facility, or long-term acute care hospital.

The guideline applies to all patients of all ages and conditions discharged from the hospital. Due to the variety of clinical scenarios in scope, the guideline focuses on the principles needed to establish appropriateness of a given level of PAC.

Definitions

Active medical management – generally requires direct physician monitoring, involvement, or intervention for medical issues at least 3 days per week for inpatient rehabilitation facilities.

Functional impairment – A mobility, self-care, cognitive and/or behavioral-related impairment which has been determined via a comprehensive, skilled assessment of the patient’s clinically significant activities on at least one validated functional measure.

Most appropriate PAC Level of Care – the facility type that offers the necessary and appropriate type and intensity of care—including specialized clinical staff and equipment—and no more.

Examples:

- a SNF is a more appropriate level of PAC than an IRF or LTACH if the necessary type and intensity of care can be provided in the SNF environment
- an IRF is a more appropriate level of PAC than an LTACH if the necessary type and intensity of care can be provided in the IRF environment

Post-acute care settings

- **Skilled Nursing Facility (SNF)** – An inpatient facility providing skilled nursing with or without rehabilitative care and classified by CMS as a SNF. Typically, it provides such care on a less than long-term basis and may be free-standing or contained within another medical institution such as a nursing home or acute care hospital. It is traditionally considered the lowest level of facility-based post-acute care, though this may vary depending on the individual facility’s characteristics.
- **Inpatient Rehabilitation Facility (IRF)** – An inpatient facility providing high-intensity, multi-disciplinary rehabilitative care coordinated by a rehabilitation physician. IRFs are commonly freestanding but may be contained within an acute care hospital. IRFs are traditionally considered the highest level of rehabilitative post-acute care and intended for patients whose care needs are primarily rehabilitative. Also commonly referred to as “Acute Rehab” or “Acute Inpatient Rehab.”
- **Long Term Acute Care Hospital (LTACH)** – An inpatient facility providing medical and rehabilitative care for patients whose medical care needs exceed their rehabilitative care needs and who are expected to require an extended course of medical treatment relative to an acute care hospital (extended course typically expected to be 25 days). Also commonly referred to as Long Term Acute Care (LTAC) or Long-Term Care Hospital (LTCH).

Qualified provider of skilled care – refers to someone who is duly licensed or certified by his/her state to deliver the specific services s/he is rendering and provides such services in accordance with his/her state’s respective practice act. State regulations regarding appropriate providers may supersede this guideline.

Clinical Indications

General PAC principles

- A facility must be sufficiently accessible (e.g., ADA compliant) to avoid compromising a patient’s care or their potential to achieve the therapeutic goals
 - Example: for patients whose goals include improved independence with toilet transfers from a wheelchair, a facility without wheelchair-accessible bathrooms would not be appropriate
- Health-related social needs (HRSN) may be considered in determining most appropriate level of care/facility when such issues are noted in the submitted clinical documentation
 - Example: the accessibility of the facility *to those who will be involved in the patient’s care upon discharge and need to undergo training throughout the patient’s stay* (e.g., a family member who will be patient’s primary caregiver in the community) may be considered in the determination of the most appropriate facility

General Criteria for Admission to SNF

Admission to a SNF is considered medically necessary as an alternative to home care when ALL the following criteria are met:

- Referral has been ordered by a physician
- Services cannot reasonably and/or safely be provided in a home or community setting due to insufficient availability, intensity, or type of services, and/or necessary equipment is unavailable
- Admission criteria for the SNF has been met (*per “Initial SNF Care” section below*)
- Care will be provided by Qualified Providers (*see Definitions*) of the respective skilled services
- Services ordered are reasonable in scope, intensity, and duration for the condition being treated
- Goals for SNF-based PAC must include **ANY** of the following:
 - Goals for and reasonable potential to achieve meaningful improvement, preservation, or slowed deterioration of functional status

- Goals for and reasonable potential to achieve meaningful improvement, preservation, or slowed deterioration of medical condition

Initial SNF Care

Admission to a SNF is considered medically necessary when the following are met:

ALL the following general criteria:

- A SNF is more appropriate than an IRF or LTACH
- Patient's diagnostic work-up and care plan have largely been determined, and any ongoing medical care needs do not exceed the capabilities of the SNF
- There is a documented need for both physician-directed medical oversight to achieve established therapeutic goals and Daily Skilled Care, including **AT LEAST ONE** of the following:
 - Seven (7) days per week nursing care
 - Five (5) or more days per week of at least one rehabilitative therapy discipline

and ANY of the following reasons for skilled services:

- Need for skilled therapy services due to functional impairment which reflects a clinically significant decline from (pre-hospitalization) baseline and precludes discharge to home
- Need for skilled nursing services
- Need for skilled services for complete assessment of caregiving needs and training of caregiver(s) to allow for return to community
- Need for frequent outpatient medical care, over a limited period, associated with undue burden and/or high risk from repeated transportation

Ongoing Skilled Nursing Facility Care

Basic Criteria for Continuation of SNF-Based PAC

Continuation of any SNF-based PAC may be considered medically necessary when the following criteria are met:

ALL the following general criteria:

- Therapeutic goals have been established and documented
- There is at least one remaining therapeutic goal which is likely attainable in a reasonable and predictable timeframe
- There is continued need for skilled medical, nursing, and/or rehabilitation therapy interventions (as applicable to the SNF level of care) to achieve the remaining therapeutic, education/training, or caregiver goals
- Patient has demonstrated good tolerance of and consistent, meaningful participation in all therapies
- A discharge plan has been formulated and (to the extent possible) executed contemporaneously during stay (so as not to extend stay unnecessarily)
- Progress towards goals has been commensurate with the duration of treatment

and ANY of the following pertaining to patient's progress:

- Patient has had a clinically significant, quantifiable, and favorable response to interventions within a reasonable timeframe, evidenced by:
 - A trend of functional and/or medical improvement (for clinical scenarios wherein progress can reasonably be expected), **or**

- Sustained prevention of functional and/or medical decline (for clinical scenarios wherein progress cannot reasonably be expected)
- Patient has a lack of clinically significant or favorable response but has an acceptable and temporary mitigating factor(s) accounting for a limited response, such as intervening illness or injury
- Patient has a lack of clinically significant or favorable response, but the plan of care has been modified in a way that is likely to improve the response in a reasonable timeframe
- Unmet goal of patient/family/caregiver education that can be achieved in reasonable timeframe relative to condition or length of stay (requires demonstrated participation/compliance)

Note: such education/training is expected to have been ongoing throughout the stay, this pertains to aspects which could not have been completed earlier (e.g., due to evolving clinical situation)

- Patient has had a change in status that:
 - enables upgraded goals*,
 - improves potential (e.g., non-weight bearing to weight bearing as tolerated, upgraded dysphagia diet, improved medical condition), **and/or**
 - would facilitate earlier discharge to community (e.g., decannulation, upgrade to po diet from PEG)

**Note: goals must still require SNF-based PAC to achieve*

- Patient's current home environment cannot safely accommodate patient's functional and/or medical needs but will be able to within a reasonable period of patient achieving the established therapeutic goals with:
 - appropriate structural modifications, **and/or**
 - patient's functional improvement from skilled interventions, **and/or**
 - necessary caregiver services arranged

and ALL additional criteria (below) are met either for continuation of SNF-level of care or transfer to higher level of PAC

Level of Ongoing Facility-Based PAC

Continuation of SNF-level care may be considered medically necessary when the following are or continue to be met:

- **ALL** Basic Criteria for Continuation of SNF-based PAC
- **ALL** criteria for admission to SNF (*per "Initial SNF care" section*)

Transfer to a higher level of PAC (i.e., IRF or LTACH) may be considered medically necessary when the following criteria are met:

- The higher level of care is the Most Appropriate Level of Care
 - **Most Appropriate PAC Level of Care** – the facility type that offers the necessary and appropriate type and intensity of care—including specialized clinical staff and equipment—and no more
- **ALL** Basic Criteria for Continuation of IRF-based (if transferring to IRF) or LTACH-based (if transferring to LTACH) PAC
- **ALL** criteria for admission to the higher level of PAC facility (*per "Initial IRF care" or "Initial LTACH care" in the respective Appropriate Use Criteria guidelines*)

and ANY of the following general criteria, as applicable to the level of care scenario:

- Patient has a change in medical and/or functional status that requires more specialized evaluation, testing, and management than can be performed in current facility but does not require or is not suitable for an acute care hospital
- Patient has new rehab needs which exceed the capabilities of current facility, such as need for:
 - specialized staff or equipment
 - integrated, multi-disciplinary care team
- Patient has DME needs best assessed and addressed by a more highly specialized and/or an inter-disciplinary team
- Higher intensity and more highly specialized rehab care would significantly increase patient's potential for discharge to community rather than long-term care
 - If goals anticipate need for caregiver, that person(s) must be identified and confirmed available prior to transfer
- Higher intensity or specialized treatment would achieve goals in a significantly more time efficient manner

and **ANY** of the following pertaining to patient's participation:

- Patient is demonstrating consistently good participation and compliance (applicable when the transfer is to better address rehabilitative needs)
- More specialized care would be expected to result in improved participation and compliance
- Patient recently experienced a change in functional status that allows increased participation and benefit from a more intense program (applicable when the transfer is to better address rehabilitative needs)

Exclusions

SNF facility care (initiation or ongoing) is considered **Not Medically Necessary** when:

- There is no reasonable expectation of progression towards goals.

Examples:

 - There is a cognitive condition such as dementia that is likely to preclude effective learning and carry-over when goals depend on such abilities
 - Identified caregiver is unwilling or unable to provide the necessary care for patients whose goals depend on caregiver involvement.
 - A caregiver is unavailable or unable to participate in the education and training with the patient as needed to achieve therapeutic goals
- Services otherwise do not meet clinical criteria outlined above

References

1. Alcusky M, Ulbricht CM, Lapane KL. Postacute Care Setting, Facility Characteristics, and Poststroke Outcomes: A Systematic Review. Arch Phys Med Rehabil. 2018;99(6):1124-40.e9.
2. Ambrosino N, Gabbriellini L. The difficult-to-wean patient. Expert Review of Respiratory Medicine. 2010;4(5):685-92. PMID: 20923345
3. American Association for Respiratory Care. AARC clinical practice guideline. Long-term invasive mechanical ventilation in the home--2007 revision & update. Respiratory care. 2007;52(8):1056-62. Epub 2007/08/25. PMID: 17715560
4. American Thoracic Society. Statement on home care for patients with respiratory disorders. Am J Respir Crit Care Med. 2005;171(12):1443-64.

5. Amin R, MacLusky I, Zielinski D, et al. Pediatric home mechanical ventilation: A Canadian Thoracic Society clinical practice guideline executive summary. *Canadian Journal of Respiratory, Critical Care, and Sleep Medicine*. 2017;1(1):7-36.
6. Amin R, Sayal A, Syed F, et al. How long does it take to initiate a child on long-term invasive ventilation? Results from a Canadian pediatric home ventilation program. *Canadian respiratory journal*. 2015;22(2):103-8. PMID: 25848720
7. Acquired Brain Injury Knowledge Uptake Strategy (ABIKUS) guideline development group. ABIKUS Evidence Based Recommendations for Rehabilitation of Moderate to Severe Acquired Brain Injury (2007) 2007. Available from: https://erabi.ca/wp-content/uploads/2018/12/abikus_aug_07.pdf.
8. Bagley PH, Cooney E. A community-based regional ventilator weaning unit: development and outcomes. *Chest*. 1997;111(4):1024-9. PMID: 9106584
9. Bindawas SM, Vennu V, Mofteh E. Improved functions and reduced length of stay after inpatient rehabilitation programs in older adults with stroke: A systematic review and meta-analysis of randomized controlled trials. *NeuroRehabilitation*. 2017;40(3):369-90.
10. Blackwood B, Alderdice F, Burns K, et al. Use of weaning protocols for reducing duration of mechanical ventilation in critically ill adult patients: Cochrane systematic review and meta-analysis. *BMJ (Clinical research ed)*. 2011;342:c7237. Epub 2011/01/15. PMID: 21233157
11. Blackwood B, Alderdice F, Burns KE, et al. Protocolized versus non-protocolized weaning for reducing the duration of mechanical ventilation in critically ill adult patients. *The Cochrane database of systematic reviews*. 2010(5):Cd006904. Epub 2010/05/14. PMID: 20464747
12. Buhagiar MA, Naylor JM, Harris IA, et al. Assessment of Outcomes of Inpatient or Clinic-Based vs Home-Based Rehabilitation After Total Knee Arthroplasty: A Systematic Review and Meta-analysis. *JAMA netw*. 2019;2(4):e192810.
13. Burton JK, Ferguson EEC, Barugh AJ, et al. Predicting Discharge to Institutional Long-Term Care After Stroke: A Systematic Review and Metaanalysis. *J Am Geriatr Soc*. 2018;66(1):161-9.
14. Castro-Avila AC, Serón P, Fan E, et al. Effect of Early Rehabilitation during Intensive Care Unit Stay on Functional Status: Systematic Review and Meta-Analysis. *PloS one*. 2015;10(7):e0130722. Epub 2015/07/02. PMID: 26132803
15. Cox CE, Carson SS. Medical and economic implications of prolonged mechanical ventilation and expedited post-acute care. *Semin*. 2012;33(4):357-61. PMID: 22875381
16. Damuth E, Mitchell JA, Bartock JL, et al. Long-term survival of critically ill patients treated with prolonged mechanical ventilation: a systematic review and meta-analysis. *The Lancet Respiratory Medicine*. 2015;3(7):544-53. PMID: 26003390
17. Davies MG, Quinell TG, Oscroft NS, et al. Hospital outcomes and long-term survival after referral to a specialized weaning unit. *Br J Anaesth*. 2017;118(4):563-9. PMID: 28403404
18. Department of Veterans Affairs Department of Defense (VA/DoD), VA/DoD Clinical Practice Guideline for Rehabilitation of Individuals with Lower Limb Amputation, (2017) Washington DC, Department of Veterans Affairs Department of Defense, 123.
19. Department of Veterans Affairs Department of Defense (VA/DoD), VA/DoD Clinical Practice Guideline for the Management of Stroke Rehabilitation, (2019) Washington DC, Department of Veterans Affairs Department of Defense, 170.
20. Dettmer MR, Damuth E, Zarbiv S, et al. Prognostic Factors for Long-Term Mortality in Critically Ill Patients Treated With Prolonged Mechanical Ventilation: A Systematic Review. *Critical care medicine*. 2017;45(1):69-74. Epub 2016/09/13. PMID: 27618272
21. Donahoe MP. Current venues of care and related costs for the chronically critically ill. *Respiratory care*. 2012;57(6):867-86; discussion 86-8. PMID: 22663964
22. Dunn H, Quinn L, Corbridge S, et al. A latent class analysis of prolonged mechanical ventilation patients at a long-term acute care hospital: Subtype differences in clinical outcomes. *Heart & Lung*. 2019;48(3):215-21. PMID: 30655004
23. Echevarria C, Brewin K, Horobin H, et al. Early Supported Discharge/Hospital At Home For Acute Exacerbation of Chronic Obstructive Pulmonary Disease: A Review and Meta-Analysis. *Copd*. 2016;13(4):523-33.
24. Eskildsen MA. Long-term acute care: a review of the literature. *J Am Geriatr Soc*. 2007;55(5):775-9. PMID: 17493200
25. Everink IH, van Haastregt JC, van Hoof SJ, et al. Factors influencing home discharge after inpatient rehabilitation of older patients: a systematic review. *BMC geriatr*. 2016;16:5.
26. Fisher RJ, Byrne A, Chouliara N, et al. Effectiveness of Stroke Early Supported Discharge: Analysis From a National Stroke Registry. *Circ Cardiovasc Qual Outcomes*. 2020;13(8):e006395.
27. Gelaw AY, Janakiraman B, Gebremeskel BF, et al. Effectiveness of Home-based rehabilitation in improving physical function of persons with Stroke and other physical disability: A systematic review of randomized controlled trials. *J Stroke Cerebrovasc Dis*. 2020;29(6):104800.
28. Gilgoff RL, Gilgoff IS. Long-term follow-up of home mechanical ventilation in young children with spinal cord injury and neuromuscular conditions. *J Pediatr*. 2003;142(5):476-80. PMID: 12756376
29. Goodwin S, Smith H, Langton Hewer S, et al. Increasing prevalence of domiciliary ventilation: changes in service demand and provision in the South West of the UK. *European journal of pediatrics*. 2011;170(9):1187-92. PMID: 21360027
30. Goncalves-Bradley DC, Iliffe S, Doll HA, et al. Early discharge hospital at home. *Cochrane Database Syst Rev*. 2017;6:CD000356.

31. Huang HC, Tsai JY, Liu TC, et al. Functional recovery of stroke patients with postacute care: a retrospective study in a northern medical center. *Journal of the Chinese Medical Association : JCMS*. 2019;82(5):424-7.
32. Jolliffe L, Lannin NA, Cadilhac DA, et al. Systematic review of clinical practice guidelines to identify recommendations for rehabilitation after stroke and other acquired brain injuries. *BMJ Open*. 2018;8(2):e018791.
33. Khadilkar A, Phillips K, Jean N, et al. Ottawa panel evidence-based clinical practice guidelines for post-stroke rehabilitation. *Topics in stroke rehabilitation*. 2006;13(2):1-269.
34. Kim C, Sung J, Lee JH, et al. Clinical Practice Guideline for Cardiac Rehabilitation in Korea: Recommendations for Cardiac Rehabilitation and Secondary Prevention after Acute Coronary Syndrome. *Korean circ*. 2019;49(11):1066-111.
35. Königs M, Beurskens EA, Snoep L, et al. Effects of Timing and Intensity of Neurorehabilitation on Functional Outcome After Traumatic Brain Injury: A Systematic Review and Meta-Analysis. *Arch Phys Med Rehabil*. 2018;99(6):1149-59.e1.
36. Konstantinides SV, Meyer G, Becattini C, et al. 2019 ESC Guidelines for the diagnosis and management of acute pulmonary embolism developed in collaboration with the European Respiratory Society (ERS). *Eur Heart J*. 2020;41(4):543-603.
37. Langhorne P, Baylan S, Early Supported Discharge T. Early supported discharge services for people with acute stroke. *Cochrane Database Syst Rev*. 2017;7:CD000443.
38. Langhorne P, Ramachandra S, Stroke Unit Trialists C. Organised inpatient (stroke unit) care for stroke: network meta-analysis. *Cochrane Database Syst Rev*. 2020;4:CD000197.
39. Laver KE, Adey-Wakeling Z, Crotty M, et al. Telerehabilitation services for stroke. *Cochrane Database Syst Rev*. 2020;1(1):Cd010255.
40. Leurer MK, Be'eri E, Zilbershtein D. Discharge of respiratory-compromised children after respiratory rehabilitation. *Isr Med Assoc J*. 2006;8(7):473-6. PMID: 16889162
41. MacIntyre EJ, Asadi L, McKim DA, et al. Clinical Outcomes Associated with Home Mechanical Ventilation: A Systematic Review. *Canadian respiratory journal*. 2016;2016:6547180. Epub 2016/07/23. PMID: 27445559
42. MacIntyre NR. Evidence-based ventilator weaning and discontinuation. *Respiratory care*. 2004;49(7):830-6. PMID: 15222913
43. Macintyre NR. Chronic critical illness: the growing challenge to health care. *Respiratory care*. 2012;57(6):1021-7. PMID: 22663975
44. Markle-Reid M, Valaitis R, Bartholomew A, et al. An integrated hospital-to-home transitional care intervention for older adults with stroke and multimorbidity: A feasibility study. *Journal of comorbidity*. 2020;10:2235042x19900451.
45. Mauri T, Pivi S, Bigatello LM. Prolonged mechanical ventilation after critical illness. *Minerva Anesthesiol*. 2008;74(6):297-301. PMID: 18500202
46. McDonough CM, Harris-Hayes M, Kristensen MT, et al. Physical Therapy Management of Older Adults With Hip Fracture. *The Journal of orthopaedic and sports physical therapy*. 2021;51(2):Cpg1-cpg81.
47. McGlinchey MP, James J, McKeivitt C, et al. The effect of rehabilitation interventions on physical function and immobility-related complications in severe stroke: a systematic review. *BMJ Open*. 2020;10(2):e033642.
48. McKim DA, Road J, Avendano M, et al. Home mechanical ventilation: a Canadian Thoracic Society clinical practice guideline. *Canadian respiratory journal*. 2011;18(4):197-215. Epub 2011/11/08. PMID: 22059178
49. Mees M, Klein J, Yperzeele L, et al. Predicting discharge destination after stroke: A systematic review. *Clin Neurol Neurosurg*. 2016;142:15-21.
50. Morkisch N, Upegui-Arango LD, Cardona MI, et al. Components of the transitional care model (TCM) to reduce readmission in geriatric patients: a systematic review. *BMC geriatr*. 2020;20(1):345.
51. National Institute for Health and Care Excellence (NICE), Chronic heart failure in adults Diagnosis and management NG106, (2018) London (UK), National Institute for Health and Care Excellence, 524.
52. National Institute for Health and Care Excellence (NICE), Stroke rehabilitation. Long-term rehabilitation after stroke, cg 162., (2018) London (UK), National Institute for Health and Care Excellence.
53. Navalesi P, Frigerio P, Patzlaff A, et al. Prolonged weaning: from the intensive care unit to home. *Rev Port Pneumol*. 2014;20(5):264-72. PMID: 24975297
54. Parker KJ, Hickman LD, Phillips JL, et al. Interventions to optimise transitional care coordination for older people living with dementia and concomitant multimorbidity and their caregivers: A systematic review. *Contemporary nurse*. 2020;56(5-6):505-33.
55. Rimmer KP, Kaminska M, Nonoyama M, et al. Home mechanical ventilation for patients with Amyotrophic Lateral Sclerosis: A Canadian Thoracic Society clinical practice guideline. *Canadian Journal of Respiratory, Critical Care, and Sleep Medicine*. 2019;3(1):9-27.
56. Røe C, Tverdal C, Howe EI, et al. Randomized Controlled Trials of Rehabilitation Services in the Post-acute Phase of Moderate and Severe Traumatic Brain Injury - A Systematic Review. *Frontiers in neurology*. 2019;10:557.
57. Royal College of Physicians Intercollegiate Stroke Working Party (ISWP). National Clinical Guideline for Stroke. 2016.
58. Scala R. Respiratory High-Dependency Care Units for the burden of acute respiratory failure. *Eur*. 2012;23(4):302-8. PMID: 22560375

59. Schönhofer B, Geiseler J, Dellweg D, et al. Prolonged Weaning: S2k Guideline Published by the German Respiratory Society. Respiration; international review of thoracic diseases. 2020;1-102. Epub 2020/12/11. PMID: 33302267
60. Scientific Resource Center under contract to the Agency for Healthcare Research and Quality (AHRQ). Topic Brief: Rehabilitation Options for Post-acute Care Diagnoses 2020 [cited 2022 January 4, 2022]. Available from: https://effectivehealthcare.ahrq.gov/system/files/docs/rehab_options_pac_diagnoses_topic_brief.pdf.
61. Scottish Intercollegiate Guidelines Network (SIGN). Brain injury rehabilitation in adults 2013 [December 3, 2021]. Available from: <https://www.sign.ac.uk/media/1068/sign130.pdf>.
62. Seneff MG, Wagner D, Thompson D, et al. The impact of long-term acute-care facilities on the outcome and cost of care for patients undergoing prolonged mechanical ventilation. Critical care medicine. 2000;28(2):342-50. PMID: 10708164
63. Simonds AK. Home Mechanical Ventilation: An Overview. Annals of the American Thoracic Society. 2016;13(11):2035-44. Epub 2016/08/26. PMID: 27560387.
64. Sims-Gould J, Tong CE, Wallis-Mayer L, et al. Reablement, Reactivation, Rehabilitation and Restorative Interventions With Older Adults in Receipt of Home Care: A Systematic Review. J Am Med Dir Assoc. 2017;18(8):653-63.
65. Sison SM, Sivakumar GK, Caufield-Noll C, et al. Mortality outcomes of patients on chronic mechanical ventilation in different care settings: A systematic review. Heliyon. 2021;7(2):e06230. Epub 2021/02/23. PMID: 33615014
66. Sterni LM, Collaco JM, Baker CD, et al. An Official American Thoracic Society Clinical Practice Guideline: Pediatric Chronic Home Invasive Ventilation. American journal of respiratory and critical care medicine. 2016;193(8):e16-35. Epub 2016/04/16. PMID: 27082538
67. Stroke Foundation of Australia. Clinical Guidelines for Stroke Management Stroke Foundation; 2021 [cited 2021 December 3, 2021]. Available from: <https://informme.org.au/en/Guidelines/Clinical-Guidelines-for-Stroke-Management>.
68. Teasell R, Salbach NM, Foley N, et al. Canadian Stroke Best Practice Recommendations: Rehabilitation, Recovery, and Community Participation following Stroke. Part One: Rehabilitation and Recovery Following Stroke; 6th Edition Update 2019. International journal of stroke : official journal of the International Stroke Society. 2020;15(7):763-88.
69. Victorian Subacute Childhood Stroke Advisory. The Subacute Rehabilitation of Childhood Stroke. Int j. 2021.
70. Wang Y, Yang F, Shi H, et al. What Type of Transitional Care Effectively Reduced Mortality and Improved ADL of Stroke Patients? A Meta-Analysis. Int J Environ Res Public Health. 2017;14(5):10.
71. Warner G, Packer T, Villeneuve M, et al. A systematic review of the effectiveness of stroke self-management programs for improving function and participation outcomes: self-management programs for stroke survivors. Disabil Rehabil. 2015;37(23):2141-63.
72. Windisch W, Geiseler J, Simon K, et al. German National Guideline for Treating Chronic Respiratory Failure with Invasive and Non-Invasive Ventilation: Revised Edition 2017 - Part 1. Respiration; international review of thoracic diseases. 2018;96(1):66-97. Epub 2018/06/27. PMID: 29945148
73. Windisch W, Geiseler J, Simon K, et al. German National Guideline for Treating Chronic Respiratory Failure with Invasive and Non-Invasive Ventilation - Revised Edition 2017: Part 2. Respiration; international review of thoracic diseases. 2018;96(2):171 - 203. Epub 2018/06/27. PMID: 29945156
74. Winstein CJ, Stein J, Arena R, et al. Guidelines for Adult Stroke Rehabilitation and Recovery: A Guideline for Healthcare Professionals From the American Heart Association/American Stroke Association. Stroke. 2016;47(6):e98-e169.
75. Yaria J, Gil A, Makanjuola A, et al. Quality of stroke guidelines in low- and middle-income countries: a systematic review. Bull World Health Organ. 2021;99(9):640-52E.
76. Zarshenas S, Colantonio A, Alavinia SM, et al. Predictors of Discharge Destination From Acute Care in Patients With Traumatic Brain Injury: A Systematic Review. J Head Trauma Rehabil. 2019;34(1):52-64.

History

Status	Review Date	Effective Date	Action
Updated	01/23/2024	Unchanged	Independent Multispecialty Physician Panel (IMPP) review of General Clinical Guideline. Added required language per new Medicare regulations.
Updated	n/a	Unchanged	Disclaimers updated from Post Acute Solutions to Carelton Medical Benefits Management.
Created, Revised	04/12/2023, 02/03/2022	09/01/2023	IMPP review. Restructured by level of care and clarified admission criteria. Original effective date.