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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

# Appropriate Use Criteria: Inpatient Rehabilitation Facility Level of Care

**Proprietary**

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## 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

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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

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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

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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**

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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 ongoing 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.

# Inpatient Rehabilitation Facility Level of Care

## General Information

### Guideline Scope

This guideline addresses post-acute care (PAC) in an Inpatient Rehabilitation Facility (IRF). Specifically, the criteria establish the appropriateness of initial admission to an IRF upon discharge from hospital, admission from home, or admission from another level of PAC. Additional criteria further establish the appropriateness of continuing facility-based PAC at an IRF.

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

#### Post-acute care settings

- **Skilled Nursing Facility (SNF)** – An inpatient facility providing skilled nursing with or without rehabilitative care and classified by the Centers for Medicare & Medicaid Services (CMS) as a SNF or by a state accrediting agency to perform the same or similar functions 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, multidisciplinary 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).

#### Most appropriate PAC level of care

Facility type that offers the necessary and appropriate type and intensity of care—including specialized clinical staff and equipment—and no more.

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

#### Qualified provider of skilled care

An individual 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.

## Active medical management

It generally requires direct physician monitoring, involvement, or intervention for medical issues at least three (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.

## General PAC principles

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A facility must be sufficiently accessible (e.g., ADA compliant\*) to avoid compromising the patient's care or 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

When noted in the submitted clinical documentation, health-related social needs (HRSN) that will impact the patient's discharge to the community may be screened and considered for appropriate, available resources.

\*ADA compliance refers to the [Americans with Disabilities Act \(ADA\) Standards for Accessible Design](#), which requires that facilities be physically accessible, including entry doors, restrooms, and other features, to people with disabilities.

## Clinical Indications

### Initial Inpatient Rehabilitation Facility Care

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#### Criteria for Initial Admission to IRF

**Admission to IRF is considered medically necessary when the following are met:**

**ALL** the following general and specialized interventions criteria:

- 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
- An IRF is more appropriate than a SNF or LTACH (see [Most appropriate PAC level of care](#) definition)
- Services ordered are reasonable in scope, intensity, and duration for the condition being treated
- Care will be provided by [qualified providers](#) of the respective skilled services
- Patient's diagnostic workup and care plan have largely been determined, and any ongoing medical care needs do not exceed the capabilities of the IRF
- There is documented need for daily, multidisciplinary skilled rehabilitation interventions (e.g., physical therapy, occupational therapy, speech language pathology therapy, psychology, prosthetics/orthotics, rehab nursing, case management). At minimum, the treatment team will include a rehabilitation physician, a registered nurse with specialized training or experience in rehabilitation, therapists from at least 2 disciplines, and a social worker or a case manager.
- Need for rehab program which is closely directed, supervised, and coordinated by a Physical Medicine and Rehabilitation (PM&R) physician (exceptions considered for facilities with no access to a PM&R specialized physician, for instance due to geographic limitations)
- Reasonable expectation that patient will be able to participate effectively in and benefit from an intensive, multidisciplinary rehab program, or otherwise have compelling rehab needs that cannot be adequately addressed at lower level of PAC (e.g., SNF)

- If patient is currently receiving skilled therapy in a SNF, **ANY** of the following pertaining to his/her participation must apply:
  - Patient is demonstrating consistently good participation and compliance
  - More specialized rehab 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
- Reasonable expectation and potential for patient to achieve meaningful, quantifiable, and sustained functional improvement
- Reasonable expectation of **ONE** of the following discharge dispositions:
  - IRF stay will result in discharge to home and/or community
  - IRF stay will result in discharge to long-term care with clinically significant improvement in functional independence and burden of care (including improvement in ability to direct their own care)

**AND** there is documented need for at least **TWO of the following three categories** of specialized interventions:

- [Active medical management](#) during the course of rehabilitation due to a reasonable expectation of **ANY** of the following:
  - Medical stability will be at risk with resumption/progression of activity
  - Patient will have specialized medical needs related to rehab condition
  - Such management will be necessary to maximize participation in therapies and optimize outcomes most efficiently
  - Such management will minimize and simplify medication regimens
  - Such management will facilitate discharge to community at higher level of independence (e.g., earlier decannulation or percutaneous endoscopic gastrostomy (PEG) tube removal, definitive long-term neurogenic bowel/bladder program)
- Higher level of rehabilitative care with respect to at least **ONE** of the following:
  - Programmatic specialization (e.g., accredited spinal cord injury, traumatic brain injury, pediatric and/or burn rehabilitation programs)
  - Intensity—*typically refers to an anticipated need for 3 hours/day or 15 hours/week of skilled therapy*
  - Integrated care involving coordination between rehab disciplines (e.g., bowel/bladder management requiring coordination of rehab physician, nursing, and therapist care), **or** between rehab and non-rehab disciplines (e.g., wound management requiring coordination of care between plastic surgery team and rehab team)
- Need for specialized equipment—*generally available only in the IRF or requires the expertise of the IRF staff to employ appropriately*—to:
  - Optimize functional outcomes
  - Avoid or minimize complications of inappropriate equipment (resulting in additional/extended care needs)
  - Optimize safety of patient and therapist during treatment (e.g., body weight supported gait training apparatus, tilt table)
  - Minimize need for medications during treatment (e.g., enclosure beds and other non-pharmacological restraints for fall prevention in agitated patients)

**AND** there is a documented need for **EITHER** of the following reasons for skilled services:



- [Functional impairment](#) which reflects a clinically significant decline from (pre-hospitalization) baseline and precludes safe discharge to home
- Complete assessment of caregiving needs and training of caregiver(s) to allow for safe return to community
  - Such caregiver(s) must be identified prior to transfer from acute hospital
  - There must be a reasonable expectation that caregiver(s) can be adequately trained to meet the patient's care needs fully upon discharge to community

## Ongoing Inpatient Rehabilitation Facility Care

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### Criteria for Continuation of IRF-Based Care

Continuation of IRF care may be medically necessary when the following criteria are met:

**ALL** the following general criteria:

- All criteria for admission to IRF continue to be met (see [Criteria for Initial Admission to IRF](#))
- Therapeutic goals have been established and documented
- There is at least **ONE** remaining functional therapeutic goal which:
  - Is likely attainable in a reasonable and predictable timeframe
  - Is reassessed at least weekly
  - Will meaningfully improve patient's functional independence and/or safety
- 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 the 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 (e.g., when medical management was needed in order for functional improvement to occur/resume)
- 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
- Patient's progress has plateaued, but s/he has had a change in status that:
  - Enables upgraded goals—*goals must still require IRF-based care to achieve*
  - 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)
- Patient's progress has plateaued, but current home environment cannot safely accommodate his/her functional and/or medical needs and will be able to within a reasonable time of patient achieving the established therapeutic goals if:
  - Appropriate structural modifications can be made (e.g., widened bedroom door necessary for patient's wheelchair)—*such modifications should have been pursued as soon as need became apparent*); **and/or**

- Necessary caregiver services arranged—*such arrangements should have begun as soon as need became apparent*)

## Exclusions

IRF facility care will be considered **Not Medically Necessary** when:

- There is no reasonable expectation of progression (or further progression) toward goals
  - Example for Initial Admission:
    - There is a cognitive condition such as dementia that is likely to preclude effective learning and carryover, but goals depend on such abilities
  - Examples for Ongoing Care:
    - Patient is at his/her pre-hospitalization functional baseline
    - Identified caregiver is unwilling or unable to provide the necessary care for patients whose goals depend on caregiver involvement
    - Caregiver is unavailable or unable to participate in the education and training with the patient as needed to achieve therapeutic goals
- Discharge is delayed due to pending home modifications that are not required in order to accommodate the patient safety upon discharge or that cannot be completed within a reasonable time relative to meeting therapeutic goals
  - Examples:
    - Widening the front door when there is another viable door for patient's entry/exit
    - Taking extra time to install a permanent concrete ramp when a temporary, safe ramp can be installed quicker
    - Contractor is not available to work on a home modification for at least another week
- 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 Rev Respir Med.* 2010;4(5):685-92.
3. American Association for Respiratory Care. AARC clinical practice guideline. Long-term invasive mechanical ventilation in the home--2007 revision & update. *Respir Care.* 2007;52(8):1056-62.
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. *Can J Respir Crit Care Sleep Med.* 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. *Can Respir J.* 2015;22(2):103-8.
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.
8. Bagley PH, Cooney E. A community-based regional ventilator weaning unit: development and outcomes. *Chest.* 1997;111(4):1024-9.
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.* 2011;342:c7237.

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. *Cochrane Database Syst Rev.* 2010(5):Cd006904.
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 Open.* 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.
15. Cox CE, Carson SS. Medical and economic implications of prolonged mechanical ventilation and expedited post-acute care. *Semin.* 2012;33(4):357-61.
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. *Lancet Respir Med.* 2015;3(7):544-53.
17. Davies MG, Quinnett TG, Ocroft NS, et al. Hospital outcomes and long-term survival after referral to a specialized weaning unit. *Br J Anaesth.* 2017;118(4):563-9.
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, (2024) Washington DC, Department of Veterans Affairs Department of Defense, 242.
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. *Crit Care Med.* 2017;45(1):69-74
21. Donahoe MP. Current venues of care and related costs for the chronically critically ill. *Respir Care.* 2012;57(6):867-86; discussion 86-8.
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.
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.
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.
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. *Eur J Pediatr.* 2011;170(9):1187-92.
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. *J Chin Med Assoc.* 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. Khadiiikar A, Phillips K, Jean N, et al. Ottawa panel evidence-based clinical practice guidelines for post-stroke rehabilitation. *Top Stroke Rehabil.* 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.
41. MacIntyre EJ, Asadi L, McKim DA, et al. Clinical Outcomes Associated with Home Mechanical Ventilation: A Systematic Review. *Can Respir J.* 2016;2016:6547180.
42. MacIntyre NR. Evidence-based ventilator weaning and discontinuation. *Respir Care.* 2004;49(7):830-6.
43. Macintyre NR. Chronic critical illness: the growing challenge to health care. *Respir Care.* 2012;57(6):1021-7.
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. *J Comorb.* 2020;10:2235042x19900451.
45. Mauri T, Pivi S, Bigatello LM. Prolonged mechanical ventilation after critical illness. *Minerva Anesthesiol.* 2008;74(6):297-301.
46. McDonough CM, Harris-Hayes M, Kristensen MT, et al. Physical Therapy Management of Older Adults With Hip Fracture. *The J Orthop Sports Phys Ther.* 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. *Can Respir J.* 2011;18(4):197-215.
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 In Adults, NG236, (2023) London (UK), National Institute for Health and Care Excellence. 73.
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.
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. *Contemp 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. *Can J Respir Crit Care Sleep Med.* 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. *Front Neurol.* 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 J Intern Med.* 2012;23(4):302-8.
59. Schönhofer B, Geiseler J, Dellweg D, et al. Prolonged Weaning: S2k Guideline Published by the German Respiratory Society. *Respiration.* 2020;1-102.
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](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. *Crit Care Med.* 2000;28(2):342-50.
63. Simonds AK. Home Mechanical Ventilation: An Overview. *Ann Am Thorac Soc.* 2016;13(11):2035-44.
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.
66. Sterni LM, Collaco JM, Baker CD, et al. An Official American Thoracic Society Clinical Practice Guideline: Pediatric Chronic Home Invasive Ventilation. *Am J Respir Crit Care Med.* 2016;193(8):e16-35.
67. Stroke Foundation of Australia. Clinical Guidelines for Stroke Management Stroke Foundation; 2021 [cited 2021 December 3, 2021]. Available from: <https://informme.org.au/guidelines/living-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. Int J Stroke. 2020;15(7):763-88.
69. Victorian Subacute Childhood Stroke Advisory. The Subacute Rehabilitation of Childhood Stroke. Int J Stroke. 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. 2018;96(1):66-97.
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. 2018;96(2):171-203.
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
Revised	10/23/2023	09/01/2024	Independent Multispecialty Physician Panel (IMPP) review. Restructured original PAC guidelines into 3 separate, level of care-specific guidelines; updated Scope and Definitions, and refined several criteria to be more applicable to IRF; removed facility accessibility and HRSN criteria; removed requirement for physician referral; added criteria in Ongoing IRF Care regarding remaining therapeutic goals; added verbiage and examples to clarify original intent or for more level of care-specific applicability; removed most criteria pertaining to transfer between IRF and other levels of PAC.
Updated 04/01/2024	n/a	Unchanged	Changed copyright from Carelon Post Acute Solutions to Carelon Medical Benefits Management.
Updated	01/23/2024	Unchanged	IMPP review. Added required language to General Clinical Guideline per new Medicare regulations.
Created	04/12/2023, 02/03/2022	09/01/2023	IMPP review. Restructured by level of care and clarified admission criteria. Original effective date.