

Clinical Considerations **(PTOT-2.0)**

Neurological Considerations (PTOT-2.4)

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Neurological conditions are typically characterized by limitations with ADLs/IADLs such as with mobility, strength, coordination, and balance, due to nervous system dysfunction. Individuals with neurologic dysfunction may also demonstrate limitations in cognition, memory, sensory function, vision, social function, and communication. Neurological conditions may be acquired due to congenital malformation, trauma/insult, or as a result of disease processes that affects the nervous system. The extent of nervous system dysfunction can vary greatly and may change over time. Neurological dysfunction may range from acute, sub-acute, or chronic states expressed as varying levels of disability. Individuals with neurologic conditions or disease can present with varied complexities and complications during an episode of care. One individual with a neurologic condition may improve ADLs/IADLs ability quickly over time, where another may remain at a functional plateau or even decline (especially in the case of progressive disease) in their ability.

Consideration of the need for skilled care of a neurological condition necessitates determining that an individual presents with a specific problem that significantly limits their ability with ADLs/IADLs that has not yet been addressed through skilled care. Baseline measures of function, sensation, and cognition should be assessed at the initiation of an episode of care and tracked throughout the episode of care through the use of standard and valid measures. It is expected that an individual will respond appropriately to skilled care in a predicted amount of time. Whereas many neurological conditions and diseases may result in permanently or progressively worse dysfunction as compared to previous baselines, it often may not be appropriate to expect a full return of abilities. How much an individual is expected to improve, plateau, or decline must also be part of a consideration for the need for skilled care. Neurological conditions may reduce the ability of a provider to get reliable assessment scores. These situations should be clearly documented. All efforts are made during the review process to consider submitted scores/measures within the clinical situation of the individual.

Individuals with neurological conditions may be classified into severity groupings utilizing any variety of established scales or criteria, such as, but not limited to, the American Spinal Injury Association Classification Scale, Modified Ashworth Scale, Glasgow Coma Scale, Hoehn and Yahr Stages, Unified Parkinson's Disease Rating Scale, etc. An individual may also be categorized within varied stages of a primary disease, such as one of four disease courses of multiple sclerosis or one of five major types of cerebral palsy. These groupings and classifications can be helpful in identifying typical presentation, severity, progression, and prognosis. They may also assist in determining treatment approaches. This clinical information may provide insight during a review of a

request for skilled care. However, authorization of care will be based on the current functional need of the individual and not on a classification alone.

There is a significant body of published high-level guidelines and systematic reviews for common neurological conditions and disease. Their recommendations suggest that skilled care for neurological conditions should encompass customized techniques and training that are task oriented, progressive, and at an appropriate intensity to drive an appropriate functional response. The literature recommends that skilled care primarily focus on active motor strategies and patient/caregiver education that addresses specific disabilities and goals with empowerment on transitioning to a home program. Strong recommendations have been made that caregivers should be involved during all stages of an episode of care. There is good evidence to support the benefit of targeted exercise and training on mobility problems. There has been increased recommendation emphasis in recent years on the importance of greater intensity of activity an individual should be advised to perform as part of their program. If the required exercise is not challenging or is routine, it may not drive positive change. Recommendations for the use of passive treatments and techniques to improve function during neurological skilled care are very limited. Evidence to support the regular use of body-weight support training, robotic/exoskeleton support training, and vibration plates is currently inconclusive. Individuals can learn a home program with their caregivers and repeat their program between in-clinic sessions. It is also recommended that individuals and their caregivers be educated on the reality of their neurological condition and be given realistic goals and expectations.

Sensory dysfunction as part of any neurologic condition can negatively affect an individual's ability with ADLs/IADLs. Current research mostly focuses on the motor aspects of recovery. However, there is evidence to suggest positive effects from sensory training for those with acquired neurological dysfunction and that it can enhance task-oriented functional training. Recommendations appear to favor passive sensory training over active.

Current best evidence recommends that individuals with progressive disease may need access to periodic episodes of skilled care across their lifespan as their mobility and sensory needs change. For those in early or less severe stages of their disease, needs may be addressed with education, self-care programs, or a very limited course of care. As their disease progresses, their needs may change on an episodic basis requiring further assessment of their mobility, ADL ability, and safety risks. It is recommended that care be used to optimize an individual's functional status given any new significant progression of disease. Encouraging self-management with realistic expectations is recommended.

Individuals with congenital neurological dysfunctions can benefit from skilled care. Habilitative training can assist in reaching developmental milestones (for pediatric considerations please refer to PTOT-2.5: Pediatric Neurodevelopmental Considerations). As individuals grow and mature, they may encounter new

motor and sensory limitations that had not previously been addressed. Evidence recommends that care be specific to the individual and focus on active, task-specific, strategies. Therapy should be moderate to high intensity requiring sufficient effort from the individual.