

Evaluation and Treatment Considerations for Physical Therapy Practice During the COVID-19 Pandemic

Assessment and Intervention Considerations During COVID-19

The purpose of this document is to provide considerations for physical therapist and physical therapist assistant practice during the current COVID-19 pandemic. It is not intended to be an all-inclusive guide for evaluation and treatment of individuals with COVID-19. Rather, the information provided are concepts that are unique to the current state of practice. Please refer to the [COVID-19 Assessment Flowsheet](#) and [Vital Signs Considerations During COVID-19](#) for suggestions for objective measures to consider when assessing a client during or after COVID-19 infection.

Risk factors that may lead to complications due to COVID-19

History of prematurity¹

- ⇒ Characteristic decreased lung function follows these children throughout life
 - Diminished exercise capacity and agility
 - Significant bronchoconstriction induced by exercise
 - Presence of airway inflammation
 - Decreased VO₂ max

History of lung injury or persistent illness²

- ⇒ Asthma
- ⇒ Recurrent Pneumonia
- ⇒ Laryngomalacia / Tracheobronchomalacia
- ⇒ Autoimmune disorders
- ⇒ Mitochondrial disorders

Diagnoses associated with diminished breath capacity or breathing efficiency²

- ⇒ Scoliosis
- ⇒ Severe postural or rib cage deformities (ie. pectus excavatum)
- ⇒ Cystic Fibrosis
- ⇒ Muscular Dystrophy
- ⇒ Congenital Myopathies
- ⇒ Down Syndrome
- ⇒ Cerebral Palsy (especially GMFCS III-V)
- ⇒ Achondroplasia
- ⇒ Phrenic Nerve or Diaphragm Dysfunction
- ⇒ Hypermobility Syndromes

Contextual Considerations: In the Hospital³

Parent psychosocial status when their child is hospitalized

- Anxiety state is real and related to three major components
 - Parent is in a state of distorted reality
 - Parent is in a state of anxiety often related to lack of (medical) information
 - Parent is experiencing a degree of guilt
- Parent/caregiver may be feeling disconnected from:
 - The patient due to quarantine / hospital visitation restrictions
 - Family and friends
 - Their child's providers and decision makers

IDENTIFY CAREGIVER:

PHYSICAL READINESS
EMOTIONAL READINESS
EXPERIENCE READINESS
KNOWLEDGE READINESS

(Lichtenthal 1990)

Child psychosocial stressors while in the hospital or ICU

- Visitor restrictions: feelings of abandonment, anxiety, stress, delirium
- Decreased ability to explore/play limiting ability to cope with hospitalization (playroom closures, limited ancillary staff such as music therapy, etc.)
- Decreased access to developmentally appropriate interactions due to confinement to hospital room

Physical therapist role in improving patient hospital stay

- Utilize developmentally appropriate play
- Communicate patient needs with social work and psychology as appropriate
- Encourage home routines (sleep and wake times)
- Video family members, when able

Contextual Considerations: In the Community

Impact of isolation, safety, and infection control regulations on patients and their families

- School closures
- Park and playground closures
- Decreased social gatherings
- Limited opportunities for movement and exercise

Evaluation and treatment with personal protective equipment on

- Document patient use of mask
- Document potential impact of patient wearing a mask on validity and reliability of standardized assessments completed during evaluation and mobility assessment

Assessment Considerations Post-Acute COVID-19: In the Community

Trajectory of COVID-19

- Were they hospitalized for a prolonged period of time?
 - Children are less likely to have severe hospital acquired weakness compared to adults³
- Were they intubated?
 - Did they develop Acute Respiratory Distress Syndrome?
 - Persistent and profound oxygenation and ventilation deficits, generalized inflammation, dysregulation coagulation, and pulmonary fibrosis seen into adulthood
 - Decreased pulmonary function and QOL lower than those with chronic asthma
 - Did they experience septic shock?
 - Younger the age a person experiences septic shock, higher the risk of residual cognitive deficits
 - Risk for diaphragm and skeletal muscle weakness
 - Cardiac rhythm disturbances and decreased left ventricle function
 - Did they receive PT in the ICU and in post-acute care?

References:

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2. Massery M. Posture and Breathing: Linking Them Together Post-COVID-19." Post-Acute COVID-19 Exercise & Rehabilitation (PACER) Project. Video. April 21, 2020. Accessed June 9, 2020. <https://www.youtube.com/watch?v=3TxStSCeOpQ>
3. Cannoy J, Sarna S, Gates E, Walter J, Maynard MC, Moulis E, Solo L. Caring for Children During the COVID-19 Pandemic: An Acute Care Perspective. APTA Acute Care & APTA Pediatrics. Webinar. July 11, 2020. https://pediatricapta.org/appt_files/news/3B2A4D91-E8C7-19E3-3EECF634CB3A25AA.pdf
4. Hillegass E. Vital Signs, Oxygen and Exercise Prescription. How are these impacted by COVID-19?. Post-Acute COVID-19 Exercise & Rehabilitation (PACER) Project. Video. Apr 11, 2020. Accessed: 4 June, 2020. <https://www.cardiopt.org/resources-covid-19.php>

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