APTA’s academies and sections formed the COVID-19 Pediatric Core Outcome Measures Task Force to identify a core set of outcome measures for pediatric patients diagnosed with COVID-19. This document provides general recommendations for use of these COVID-19 pediatric core outcome measures in clinical practice. (For adult patients with COVID-19, see the COVID-19 Core Outcome Measures consensus statement.)

COVID-19 Pediatric Core Outcome Measures Set

To ensure consistency and better understand trends in functional recovery, use these core outcome measures according to the algorithm beginning on page 3. The structure and flow may be adapted for each practice setting.

1. Children and Adolescent Scale of Participation (CASP)
2. Standing Long Jump Test (SLJ)
3. Timed Floor to Stand Test (TFTS)
4. One-Minute Sit to Stand Tests (1M-STS)

Purpose of a Core Outcome Measures Set

- To use consistent objective measurement strategies across the continuum of care to aid in the development of effective plans of care for ambulatory children aged 5-18. An additional set of recommendations is given for younger children, children with significant disabilities, and children who use a wheelchair for mobility.
- To allow aggregation of data regarding the impacts of COVID-19 and interventions related to the treatment of COVID-19 on the movement system of children.

Clinical Considerations

General Recommendations

- Use the core outcome measures with children with varying developmental abilities who have or are recovering from COVID-19. Note that not all outcome measures must be performed on the same visit.
- Attempt all appropriate core measures if the child can consistently follow commands, are at least five years of age, and are ambulatory. See additional considerations according to ability and age.
- Review the cardiopulmonary and mental health considerations within the algorithm before beginning and while administering the tests as noted on the algorithm.
- The algorithm presents the tests in order of expected difficulty, but use your clinical judgment to determine the optimal order of completion for each child.
- Communicate and collaborate with parents and providers when there are any concerns regarding vital signs, response to activities, or new or adversely progressive signs or symptoms.
Before Performing the Core Outcome Measures

- Perform an individualized screening and parent interview (see “Start” on the algorithm).
- Consider severity of illness, developmental level, past medical history, and current situation when determining the child’s ability to participate in the evaluation.
- Screen for the child’s cognitive ability to complete the core outcome measures. Consider these five simple commands: “Close and open your eyes.” “Look at me.” “Stick out your tongue.” “Nod your head.” “Raise your eyebrows.”
- Monitor for the presence of delirium, and if present complete the Richmond Agitation-Sedation Scale before performing the Pediatric Confusion Assessment Method for delirium.
- Engage in interprofessional collaboration as setting allows.

Special Considerations While Performing the Core Outcome Measures

- For children with developmental abilities that prevent participation in the core outcome measures or who are too young to perform the task, see alternative suggestions within the algorithm.
- If child is nonambulatory, complete the wheelchair outcome measures noted in the algorithm.
- For children who score at the ceiling or floor of a measure, see the recommendations within the algorithm. Return to the core set for all subsequent measures; for example, when the child’s status has improved beyond the floor effect or regressed to below the ceiling effect of the outcome measure.

After Performing the Core Outcome Measures

- Complete additional tests or measures warranted by the child’s clinical presentation.
START: Complete a thorough parent interview, chart review, and systems review. Place emphasis on integumentary and system screen for MIS-C, and screen for heart failure, ischemia, and hypoxia.

Complete quick cognitive screen (e.g., alert and oriented, RASS; complete five commands).

Ask caregiver to assist with CASP.

Perform CASP.

Monitor vitals throughout. Unstable vitals at any time warrants cessation of activity and communication with the health care team.

Start core measures (always include raw data and sum scores).

Nonreader or currently unable?

Perform appropriate tests and measures for varying presentations. Refer to cardiovascular and pulmonary, and mental health considerations.

SPECIAL CONSIDERATIONS

Cardiovascular and pulmonary: Refer to the American College of Sports Medicine for screening and exercise testing guidelines. When applying ACSM recommendations, follow individualized vital sign parameter orders from the provider. Complete the Six-Minute Walk Test as soon as the child is able. Consider the Ankle Brachial Index.

Mental Health: Consider the impact of social isolation, potential for adverse childhood events, and abuse in the home. Screen and refer appropriately. Consider the Strengths and Difficulties Scale to assess mental health. Consider emotional state as it relates to patient safety.

For children or youth 5-18 years who are ambulatory:

Consider the Dynamic Gait Index or Timed Up and Down Stairs (if stairs are available).

Consider the Kasch Pulse Recovery Test (Three-Minute Step Test) or MET-level test.

Consider FitnessGram and Brockport items as appropriate.

Consider the Kasch Pulse Recovery Test (Three-Minute Step Test) or MET-level test.

Perform Standing Long Jump Test.

Score Standing Long Jump Test as "0," then complete 5xSTS, or appropriate UE strength testing.

Score the core outcome measures as "0," then complete TUG (with device if needed).

Score One-Minute Sit to Stand Test as "0," then complete the 30 SWT.

Floor Effect

Floor Effect

Floor Effect

OR

OR

OR

For children 5-18 years who use a wheelchair:

Perform Seated Push-up Test.

Perform Utrecht Pediatric Wheelchair Mobility Test.

Perform IOM Wheelchair Sprint Test.

Frequency Recommendations: Perform all tests on entry to PT services. Repeat prior to discharge or discontinuation, entry to next setting, and any time there is a significant change. Disease interval testing frequency: 30 days and 3, 6, and 12 months post COVID-19 diagnosis.

Abbreviations: 5 x STS=Five Times Sit to Stand Test; 30SWT=Thirty-Second Walk Test; CASP=Children & Adolescent Scale of Participation; FLACC=Face, Legs, Activity, Cry, Consolability Pain Scale; MIS-C=multisystem inflammatory syndrome in children; MRC-SS=Medical Research Council-Strength Scale; MET level=metabolic equivalent of task level; RASS=Richmond Agitation-Sedation Scale; TUG=Timed Up and Go Test.

END: Communicate with health care team.

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