**CLINICAL PATHWAY:**

**COVID-19 Cardiology Return to Play Algorithm**

**Inclusion Criteria:** Children ≥ 5 years of age positive for COVID-19 infection

**Exclusion Criteria:** Children < 5 years of age (children < 5 years old do not generally participate in rigorous sport therefore do not require evaluation for return to play)

**COMMENTS:**
- If under age 5 years but there are cardiac concerns (e.g. syncope, arrhythmia, new murmur), contact cardiology to discuss.
- If febrile, consider a diagnosis of Multi-System Inflammatory Syndrome in Children

If there is a clinical suspicion for Multi-System Inflammatory Syndrome in Children (MIS-C), please follow the MIS-C Clinical Pathway. Clinical suspicion would include: Fever ≥38°C for ≥24 hours and any one of the following:
- GI: abdominal pain, diarrhea, vomiting
- CV: chest pain, arrhythmia, signs of shock, hypotension
- Mucocutaneous rash, oral changes, conjunctivitis, extremity swelling/peeling
- Resp: cough, shortness of breath, difficulty breathing
- Neuro: altered mental status, headache, irritability

**Initial Management:**
- Inform patient to isolate per CDC guidelines
- Evaluate patient to determine if patient is or is not at risk for a significant life threatening event in a shared decision-making process*
- Ensure patient abstains from exercise until the following criteria have been met:
  - 10 days have passed from first positive COVID-19 test
  - Afebrile for ≥24 hours without fever-reducing medications

Further management is determined by algorithm below.

**Asymptomatic or mildly symptomatic COVID-19 infection**
- PCP to evaluate in office
- Cardiology will evaluate and return to play criteria

**Cardiac signs or symptoms present3**
- May return to play without additional evaluation after routine sports pre-participation screening by PCP
- Refer to cardiology (Appendix A)

**Moderate1 symptoms of COVID-19 infection**
- PCP to evaluate in office
- PCP to obtain EKG (Appendix A)

**Positive cardiac signs/symptoms1 and/or abnormal EKG**
- PPO to place cardiology referral (Appendix A)
- Cardiology will guide evaluation and return to play criteria

**Severe2 symptoms of COVID-19 infection**
- PCP to place cardiology referral (Appendix A)
- Cardiology will determine need for additional tests, including, but not limited to:
  - Cardiac MRI
  - Stress test
  - Rhythm monitor

**Return to play should be restricted for 3-6 months and will be directed by Cardiology**

**Cardiac signs/symptoms:**
- Significant:
  - Chest pain consistent with a cardiac etiology
  - Shortness of breath out of proportion to URI symptoms
  - Syncope not clearly consistent with a vasovagal cause
  - New onset palpitations

**Moderate symptoms of COVID-19 infection include:**
- 24 days of:
  - Fever ≥100.4°F
  - Myalgia, chills, or significant lethargy
  - Required non-ICU hospitalization without MIS-C
  - Based on PCP clinical judgment

**Severe symptoms of COVID-19 infection include:**
- Required ICU admission
- Diagnosis of MIS-C
- Previous abnormal cardiac testing
- Based on PCP clinical judgment

*The American College of Cardiology believes in the concept of “shared decision-making [as] the foundational framework of the contemporary sports eligibility discussion”. This shared decision-making framework can be adopted to help specialists and primary care providers determine if a patient is, or is not, at significant increased risk over the general population for a significant life-threatening event.

References:
EKG Locations:
The following locations provide same-day EKG services. Walk-ins are welcome at both locations, however, please refer or call ahead to allow timely check-in and social distancing.

- **Hartford**
  - Monday-Friday, 8 am-3:45 pm
  - 282 Washington St., 2nd Floor, Suite 2B
  - Hartford, CT, 06106

- **Danbury**
  - Monday-Friday, 8 am-4 pm
  - 105-A Newtown Rd.
  - Danbury, CT, 06810

The following location is by appointment only:
- **Glastonbury**
  - Monday, Tuesday, Wednesday, and Friday
  - 310 Western Boulevard
  - Glastonbury, CT, 06033

Cardiology Referral Guidelines

- To refer a patient, please visit connecticutchildrens.org/make-a-referral/refer-a-patient or contact One Call **Phone**: 833.733.7669 **Fax**: 833.226.2329
- Cardiology evaluations will take place after 14 days from the first positive COVID-19 test. If the cardiology evaluation is deemed urgent by the referring provider, call the One Call referral line to speak with Cardiology directly.
• All individuals should be counseled to monitor for cardiac signs and symptoms with return to play.
  o These include: chest pain, shortness of breath out of proportion for upper respiratory tract infection, new-onset palpitations, syncope.
  o If any of these occur, patient should be evaluated by the PCP again and consider pediatric cardiology consultation.
• Age Based Return to Exercise Guidelines:
  o <12 years old:
    ▪ Progress back to sports according to own tolerance
  o ≥12 years old:
    ▪ Graduated return to play

The following progression was adapted from Elliott N, et al, infographic, British Journal of Sports Medicine, 2020:

Stage 1: Day 1 and Day 2 - (2 Days Minimum) - 15 minutes or less: Light activity (walking, jogging, stationary bike), intensity no greater than 70% of maximum heart rate. NO resistance training.

Stage 2: Day 3 - (1 Day Minimum) - 30 minutes or less: Add simple movement activities (eg. running drills) - intensity no greater than 80% of maximum heart rate.

Stage 3: Day 4 - (1 Day Minimum) - 45 minutes or less: Progress to more complex training - intensity no greater than 80% maximum heart rate. May add light resistance training.

Stage 4: Day 5 and Day 6 - (2 Days Minimum) - 60 minutes - Normal training activity - intensity no greater than 80% maximum heart rate.

Stage 5: Day 7 - Return to full activity/participation (i.e., contests/competitions).

References:
• AAP COVID-19 Interim Guidance: Return to Sports and Physical Activity