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Specific Considerations for Pediatric, Fetal, and Congenital Heart Disease Patients and Echocardiography Service Providers During the 2019 Novel Coronavirus Outbreak: Council on Pediatric and Congenital Heart Disease Supplement to the Statement of the American Society of Echocardiography – released 6 April 2020

- Children less likely to be severely affected, but may be asymptomatic carriers – screening strategies use for adults are likely to be less effective
- When possible, keeping waiting and scanning areas for pregnant women/fetal echos separate from children is ideal
- For low risk patients with good cardiac imaging on routine anatomy scan, consider canceling fetal echo – specific recommendations for imaging of moderate and high risk patients discussed in detail (tables, flowsheets) in document
- Consider telemedicine discussion of echo results for fetal echos – otherwise, consolidate visits as much as possible ie combine with OB care
- Given complexity of anatomy, focused TTE is likely superior to POCUS exams to limit need for repeating imaging
- Focused exams, as much as possible depending on complexity of heart disease, are preferred
- As with adults, matching sonographer skill with needs for echo and allowing real time feedback from reading physician should be prioritized
- For intraop and all other TEE, all children without documented negative COVID testing within 72h should be presumed positive
- For intraop TEE, anesthesia should place probe immediately after intubation when full PPE is already being worn; probe should be removed while still under deep general anesthesia and cleaned immediately
- Full statement available at <https://www.asecho.org/ase-statement-covid-19/>

Comparison of heart failure and COVID-2019 in chest CT features and clinical characteristics

- Small retrospective study compared 7 patients admitted with heart failure exacerbations with 12 COVID+ patients
- COVID patients more likely to have fever, cough
- Inflammatory markers were elevated in both groups; WBC more likely to be elevated in HF
- Interstitial thickening and alveolar edema were common on CT in both groups, but they tended to be central/dependent (depending on sitting vs reclining) in HF and more peripheral in COVID
- Pleural effusions, pulmonary vein dilation more common in HF
- Perspective: This was a small study, but it raises a few key points about differentiating between chest CT findings. Keep HF on the differential for COVID+ patients – given what we know about increased risk of severe disease for patients with CV disease as well as the prevalence of myocardial injury with COVID, we may see more and more overlap of the two diseases requiring careful decision-making about appropriate therapies
- DOI: 10.3760/cma.j.cn112148-20200218-00093

## Triage Considerations for Patients Referred for Structural Heart Disease Intervention During the Coronavirus Disease 2019 (COVID-19) Pandemic: An ACC /SCAI Consensus Statement

- Four key priorities:
  - Minimize COVID exposure for patients and structural interventional teams
  - Maintain high quality and durable outcomes for patients requiring structural intervention during pandemic
  - Reduce the risk of structural heart disease patients using resources at the expense of those with COVID
  - Prevent delays in intervention for patients at high risk of clinical deterioration, heart failure, and/or death
- Geographical considerations will need to factor into timing of procedures as pandemic unfolds
- Frameworks for specific lesions (TAVR, MV, etc) listed individually
- Perspective: Explicitly stating that procedures which are non-emergent but will prevent clinical decompensation is important moving forward as so much routine clinical care is put on hold for COVID. While this guidelines specifically discussed structural heart lesions and interventions, the key criteria and thought processes are applicable to adult and congenital cardiac surgery as well as other interventional procedures
- Summary by ACC available at [https://www.acc.org/latest-in-cardiology/articles/2020/04/06/12/49/acc-scai-consensus-document-guides-triage-for-structural-heart-disease-during-covid-19?utm\\_source=accupdate&utm\\_medium=email\\_newsletter&utm\\_content=20200410&utm\\_campaign=accupdate](https://www.acc.org/latest-in-cardiology/articles/2020/04/06/12/49/acc-scai-consensus-document-guides-triage-for-structural-heart-disease-during-covid-19?utm_source=accupdate&utm_medium=email_newsletter&utm_content=20200410&utm_campaign=accupdate)
- DOI: 10.1016/j.jcin.2020.04.001

## Palliative care considerations for patients with cardiovascular disease under COVID-19:

- Key palliative care domains to consider: identification of resources, advance care planning, symptom control
- Prehospital discussions with high-risk patients performed by the physician team they know best are extremely valuable
- Telehealth is an appropriate forum for these difficult conversations to ensure patients wishes regarding hospitalization and treatment are clear – both for CV related illness as well as COVID-specific illness
- Palliative care physicians can potentially be helpful both by speaking with patients/families either outpatient or inpatient, but potentially in a consultative role to provide CV physicians with resources and options to present to patients directly
- Keeping comfort and dignity as goals of care with vulnerable patients can minimize pain and suffering – these can be further alleviated with thoughtful ways of including families through phone, video, pictures, or other means
- Perspective: While there is a symptom-specific table related to CV disease, this overall is a nice summary of the importance of initiating palliative care discussions with established, chronically ill patients early as an outpatient
- Published online in Cardiology Magazine (an ACC online publication) 9 Apr 2020 at <https://www.acc.org/latest-in-cardiology/articles/2020/04/09/12/42/palliative-care-considerations-for-patients-with-cardiovascular-disease-under-coronavirus-disease-2019-covid-19>