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**Standardized Point-of-care Ultrasound (POCUS) set-up for cardiac evaluation during COVID-19 pandemic in a pediatric population.**

Anmol Goyal

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Title: Standardized Point-of-care Ultrasound (POCUS) set-up for cardiac evaluation during COVID-19 pandemic in a pediatric population.

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#### Background:

The novel coronavirus SARS-CoV2 is known to cause significant cardiac dysfunction, effusion, thromboembolism and coronary dilation. Currently no pediatric specific guidelines exist from ACC or ASE for use of POCUS. Our objective was to identify ideal pediatric appropriate POCUS equipment and standardize its use.

#### Methods:

A Phillips Lumify probe paired with Android-Samsung tablet and a Butterfly iQ probe paired with an iPad were considered. A workflow algorithm and cleaning instructions were created. If the POCUS scan answered the clinical question, then a detailed echo was deferred. If the POCUS scan revealed findings requiring comprehensive evaluation, a follow-up echo was planned.

#### Results:

Both probes produced images of diagnostic quality. Due to hospital informatics support for iOS system, a Butterfly probe with iPad was preferred. Our network algorithm and equipment set-up are illustrated in figure 1a-b. By using POCUS, pericardial effusion and systolic dysfunction could be identified and monitored as shown in figure 1c. Coronary and valve evaluation was limited. Average scan time was around 10 mins [range 6-15mins].

#### Conclusion:

POCUS during COVID-19 pandemic is feasible in pediatrics with short scan time. Multiple economical probes are available that are easy to use and clean. Further studies and pediatric specific guidelines are needed with respect to the use of this modality as a first-line for cardiac assessment in COVID-19 or similar acute care setting.