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2022 Critical Care Transport Medicine Conference Scientific Forum

The following abstracts are from the poster presentations submitted to the 30th Annual Critical Care Transport Medicine Conference. The Scientific Forum is sponsored by the Air Medical Physician Association, Air & Surface Transport Nurses Association, and International Association of Flight & Critical Care Paramedics. For more information, contact Nikole Good at ngood@astna.org.

Prevalence of Asymptomatic COVID-19 Infection Among Air Medical Crew

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Background: Air medical transport of COVID-19 patients is challenging and presents a high-risk exposure for many air medical crew. Previous investigations have concluded that routine PPE utilized by air medical crew using routing personal protective equipment is safe and effective at preventing symptomatic COVID-19 infections. However, it is unclear to what extent providers may be exposed, contract COVID-19, and remain asymptomatic but potentially contagious. Previous reports suggest up to 6.4% of infected health care personnel are asymptomatic.

Methods: We conducted an IRB approved, primary mixed-methods research study that tested for COVID-19 antibodies in a cohort of participants previously surveyed regarding COVID-19 symptoms. Written consent was obtained by all participants. ELISA testing was performed at the University of New Mexico Center for Global Health Laboratory. Testing included measuring for COVID-19 antibodies in a manner that was independent of vaccination status. Participants also filled out a secure electronic survey to aide in the qualitative data collection and analysis.

Results: There were 42 participants. Labs samples were obtained between June 2021 and October 2021. Of the 42, 40 were vaccinated (95.2%) and 2 were unvaccinated (4.8%). Of the 40 who were vaccinated, 1 person had the 2-part Moderna vaccine, the rest had the 2-part Pfizer vaccine. 10 of 42 (23.8%) had experienced potential symptoms of COVID-19 at some point in time but had never had a positive test and 32 (76.2%) never experienced any symptoms. Of the 42, 4 had a positive ELISA test for COVID-19 antibody for a positivity rate of 9.52%. Out of the 4 subjects that tested positive, 3 (75%) never experienced any symptoms.

Conclusion: While the routine use of PPE has been proven to be effective in protecting air medical personnel from symptomatic COVID-19 infection, asymptomatic infection remains a concern. We found that 3 out of 4 that tested positive were asymptomatic. This is significant considering asymptomatic infection poses a risk to air medical crew, patients, coworkers, families, and the general public. Further investigation is required to better ascertain potential gaps in

protective equipment or other latent sources of infection that pose risks to air medical crew.

A Review of Patient Population Requiring Novel Critical Care Pediatric Transport Stroke Clinical Practice Guideline: A Three Year Single Site Analysis

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Objectives: 1. To identify patients transported by a pediatric critical care transport team for suspected or confirmed acute ischemic stroke who met qualifications of stroke activation. 2. Retrospective calculation of Large Vessel Occlusion (LVO) score of patients meeting criteria for transport stroke protocol activation.

Background: There are many pre-hospital Emergency Medical Service (EMS) and transport protocols as well as Large Vessel Occlusion (LVO) screening tools that exist for rapid transport of an adult patient with suspected or confirmed acute ischemic stroke to the nearest stroke center for rapid diagnosis. These screening algorithms aid in identifying adult patients who benefit from transport directly to an adult comprehensive stroke center. No data has been published on pre-hospital and transport evaluation and treatment algorithms for suspected acute ischemic stroke in children. Our institution created and implemented a transport stroke clinical practice guideline specific to pediatric stroke to improve recognition and management of patients with suspected stroke by our interfacility critical care transport team.

Methods: A retrospective chart review of patients transported by our institution's critical care transport teams from September 1, 2016 and March 1, 2020 meeting institutional criteria for stroke activation. LVO scores were calculated retrospectively based on clinical information documented within the transport medical record.

Results: Of the 17,244 patients transported by our institution's critical care transport, 17 patients met criteria during the defined study period. Average/median age was 173 months, or 14.4 years old. 4 of 17 had radiographic evidence of thrombus with 3 of those 4 underwent definitive management with tPA or endovascular retrieval. Hemiplegia is the most common presenting symptom with confirmed stroke in this population. The confirmed stroke group scored