

# ATS 2024 Highlights

## Respiratory Structure and Function Early Career Professionals



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### *Get to know members of the RSF Assembly*

*Is your research clinical, basic science or translational?*

Clinical

*Tell us about your research?*

I have varied interests in pulmonary medicine and critical care. Within pulmonary medicine, my research has been focused on pleural diseases, particularly from an interventional pulmonology perspective. Within critical care, my research has focused on ARDS, minimizing ventilator induced lung injury and salvage therapies for hypoxemia in ARDS.

*Where do you see yourself in 5 years?*

As a faculty, I hope to become a professor in my institution and lead more clinical trials in ARDS and continue with my collaboration with other institutions within this field.

*What do you find is the major benefit of RSF Assembly Membership?*

In my mind, the major benefit lies in the networking and collaboration opportunities that is the most promising benefit of being part of this assembly. The beauty is that such opportunities exist for everyone at any stage of their career.



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#### JAMA

**QUESTION** Does prone positioning reduce endotracheal intubation in adults who were awake and not intubated and who had hypoxemic respiratory failure from COVID-19?

**CONCLUSION** Although the findings do not support prone positioning in this setting, the effect size for the primary study outcome was imprecise and does not exclude a clinically important benefit.

#### POPULATION

283 Men  
117 Women



Adults hospitalized with COVID-19, but not intubated, who required  $\geq 40\%$  oxygen or noninvasive ventilation

Mean age: 57.6 years

#### LOCATIONS

21 Hospitals  
in Canada, Kuwait,  
Saudi Arabia, and the US



#### INTERVENTION

400 Patients randomized

205

**Prone positioning**  
Usual care with awake prone positioning sessions for 8-10 h/d



195

**Control treatment**  
Usual care without awake prone positioning



#### PRIMARY OUTCOME

Endotracheal intubation by day 30

#### FINDINGS

Patients receiving endotracheal intubation

**Prone positioning**  
70 of 205 patients



**Control treatment**  
79 of 195 patients



Hazard ratio, **0.81**  
(95% CI, 0.59 to 1.12);  $P = .20$   
Absolute difference, **-6.37%**  
(95% CI, -15.83% to 3.10%)

Alhazzani W, Parhar KKS, Weatherald J, et al; COVI-PRONE Trial Investigators and the Saudi Critical Care Trials Group. Effect of awake prone positioning on endotracheal intubation in patients with COVID-19 and acute respiratory failure: a randomized clinical trial. *JAMA*. Published online May 15, 2022. doi:10.1001/jama.2022.7993

**Abstract Title:** Awake Prone Positioning in Acute Hypoxemic Respiratory Failure from COVID-19: A Randomized Clinical Trial

**Objective:** The efficacy and safety of awake prone positioning (APP) in hypoxemic patients with coronavirus disease 2019 (COVID-19) is unclear.

**Aim:** To evaluate the efficacy and safety of APP in non-intubated adults with COVID-19.

**Methods:** We performed a pragmatic, international, randomized trial at 21 centers in Canada, Saudi Arabia, Kuwait, and the United States between May 19, 2020, and May 18, 2021. Eligible patients were hospitalized adults with COVID-19 requiring  $>40\%$  oxygen. Patients were randomized to APP (n=205) or usual care (n=195). The primary outcome was intubation by day 30. Secondary outcomes included mortality at 60 days, ventilation-free days at 30 days, intensive care unit (ICU) and hospital-free days at 60 days, adverse events, and serious adverse events.

**Results:** Patients in the APP group proned for a median of 4.8 hours per day (IQR 1.8 to 8.0) in the first 4 days. By day 30, 70/205 patients (34.1%) in the APP group and 79/195 (40.5%) in the control group were intubated (hazard ratio [HR] 0.81; 95% confidence interval [CI] 0.59 to 1.12). APP did not reduce mortality at 60 days (HR 0.93; 95% CI 0.62 to 1.40) and had no effect on days alive invasively or noninvasively ventilated at 30 days, or days out of ICU or hospital at 60 days. There were no serious adverse events in either group. A prespecified subgroup analysis suggested that APP reduced intubation among patients with  $SpO_2:FiO_2 >150$  (HR of 0.44, 95% CI 0.23 to 0.87) but not among patients with  $SpO_2:FiO_2 <150$  (HR 1.02; 95% CI 0.70 to 1.48;  $P$ -interaction=0.03).

**Conclusion:** APP did not significantly reduce intubation at 30 days or mortality at 60 days overall, but may be effective in patients with  $SpO_2:FiO_2 >150$ .



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