Studied that examined whether prone positioning or undergoing a lung transplant are effective approaches in treating COVID-19 were among the diverse presentations at the American Thoracic Society’s (ATS) recent annual conference. In this May 26 conversation, Andrew J. Halayko, MSc, PhD, the conference’s chair and a professor of physiology and internal medicine at the University of Manitoba in Canada, discussed some of the findings with JAMA. The following is an edited version of that podcast interview.

JAMA: Let’s start with the COVI-PRONE [Awake Prone Position in Hypoxemic Patients with Coronavirus Disease 19] trial, which was presented at the ATS conference and recently published in JAMA.

DR HALAYKO: The basis of this was really to ask the question in a randomized clinical trial about whether prone positioning of awake patients with hypoxic respiratory failure due to COVID-19 reduced the chance of endotracheal tube intubation. Of the 400 patients in this study, 34% of those who received awake prone positioning were intubated, whereas 40% were intubated if they received standard of care. Although the hazard ratio was 0.81, suggesting about a 20% decrease in intubation, after 30 days in the awake-prone-positioned patients, this was not a statistically significant difference. The authors of this international trial stated that the fact that statistical significance wasn’t achieved does not necessarily mean that this may not be clinically important, as the effect size for the primary study outcome was imprecise and there was heterogeneity in the patients included in the study.

JAMA: Another study presented at the ATS conference and recently published in JAMA described the clinical characteristics and outcomes of patients with COVID-19-associated acute respiratory distress syndrome (ARDS) who underwent lung transplant and compared them with lung transplants performed on patients without COVID-19 during the same period.

Now I’d like to turn to a study that was presented at the ATS conference and recently published in JAMA Internal Medicine about the effect of COVID-19 on family members. The primary goal of this study was to evaluate symptoms of posttraumatic stress disorder (PTSD) in family members of patients who were admitted to the ICU [intensive care unit] with COVID-19.

DR HALAYKO: This study stems from an existing understanding that engaging family members in intensive care delivery is important at reducing stress both for the patient as well as the family members. Early in the COVID-19 pandemic, family members weren’t allowed to come into the ICU or visitation was very limited. And the question is how did this affect posttraumatic stress disorder symptoms in these family members? This study included 330 family members, mostly children and spouses or partners of ICU patients, and found substantial symptoms of PTSD 3 months after the ICU admission of a family member with COVID-19. Hispanic ethnicity, female sex, and lower levels of education were associated with higher levels of PTSD symptoms in these family members.

JAMA: One interesting thing about this study is that 90% of the participants had a family member who was admitted to the ICU during the first 3 months of the pandemic, from February through April 2020. During that time, no effective treatments or vaccines existed, and there were school and work closures, quarantines, and visitation restrictions. It would be interesting to repeat this study at this point in the pandemic to see whether the PTSD levels of family members would be similar now.

Moving away from COVID-19, I’d like to discuss the updated US Preventive Services Task Force (USPSTF) recommendation statement about screening for chronic obstructive pulmonary disease (COPD), which was also presented at the ATS conference.

DR HALAYKO: This 6-year follow-up to the previous USPSTF recommendation statement reaffirmed that screening patients who are not exhibiting COPD symptoms is not
recommended. The take-home message is that clinicians could be investing their time into introducing or guiding patients through smoking cessation protocols because this would potentially have greater effect on health than spending the time and money to screen asymptomatic patients for COPD.

Issues for further research and gaps that need to be addressed include whether early treatment of patients with few or no symptoms of COPD is worthwhile, and whether early intervention with bronchodilators or inhaled corticosteroids could have adverse effects in these patients.

**JAMA:** Are there other research articles or talks presented at the ATS conference that you would like to highlight?

**DR HALAYKO:** Our opening keynote address was by Rana L. Awdish, MD, MS, medical director of care experience for Henry Ford Health and associate professor of medicine at Wayne State University School of Medicine in Detroit, and Megan M. Hosey, PhD, assistant professor of physical medicine and rehabilitation at the Johns Hopkins University School of Medicine in Baltimore, Maryland. Their presentation was entitled "Restoration in the Aftermath," and addressed how we restore ourselves in the aftermath of what we have been through with this COVID-19 pandemic. And that’s not to say that it’s over yet, but it really was a profound message that used a storytelling framework to illustrate pandemic experiences of patients, family members, and clinicians. A review article based on the content of this presentation is being prepared and will be published in one of the ATS journals.

Another keynote talk I would like to highlight was by Michael Fiore, MD, MPH, MBA, Hilldale Professor of Medicine at the University of Wisconsin, and founder and director of the UW Center for Tobacco Research and Intervention in Madison, Wisconsin. Dr Fiore showed that the trajectory for tobacco use in the US is going in the right direction and discussed the achievable goal of eliminating all tobacco product use in the US by 2030. A main take-home message was that if we reduce nicotine to essentially nothing in these products, they will go away. And he included a very strong statement about e-cigarettes and vaping products, in particular, those targeting children. He explained that if nicotine is introduced to people under 17 years of age through e-cigarettes, this will create a generation of people who are addicted to nicotine.

Another keynote address called "Cutting Through the Smoke: Confronting the Climate Crisis Through Patient Care and Policy" was a joint presentation by Mary Rice, MD, MPH, associate professor of medicine at the Beth Israel Deaconess Medical Center in Boston, and John Kerry, US Special Presidential Envoy for Climate and former US Secretary of State, who spoke via video about how we turn what we know into policy. Dr Rice discussed the importance of indoor and outdoor air pollutants as determinants of lung health from a lifelong perspective and emphasized that climate change and air quality are issues that are not going away. She described that she routinely talks to her patients with asthma about the need to avoid triggers for their disease by monitoring air quality through apps on their phone or from information on television, and to make decisions about daily activities based on air quality. There seemed to be a resounding positive sense that things can be done to address the climate crisis, and that policy change is coming that will meet these needs.

A session entitled "The Exposomes Concept: Understanding Impact on Lung Health and Disease" was cochaired by Christopher Carlsten, MD, MPH, professor of medicine, and head of respiratory medicine at the University of British Columbia in Canada and Jane E. Bourke, PhD, associate professor of pharmacology at Monash University in Melbourne, Victoria, Australia. This session included a series of talks about the concept of exposome, which refers to the totality of exposures people experience during their lives. While we have traditionally looked at lung health and exposures to ozone, smoke, or cigarette smoke in isolation, the reality is that we inhale combined pollutants on a regular basis. The effect is sometimes multiplied or synergistic, and those pollutants can change their properties when combined. It is our biological lifelong response to these exposomes that determines our lung health.