August 24, 2021

CTS INSPIRATIONS

CTS NEWS

President's Message

COVID-19 is unfortunately surging again; with the number of cases in some areas back up to previous peak numbers while uncertainty looms regarding variants, effectiveness of the current vaccines and anti-COVID therapeutics. Fortunately, we are better prepared this time with surge ICU's and other resources including the availability of various monoclonal antibodies. Most of us at CTS, like many of you, are on the front line working long hours and providing essential care to our patients. I am extremely proud to be a part of the CTS thoracic community. I want to express a message of solidarity to our entire group for doing what you do -- thank you.

Sadly, many communities still have underwhelming vaccination numbers. The effectiveness of the vaccine is unquestionable given that unvaccinated individuals constitute the vast majority of acute respiratory failure cases in the ICUs. On behalf of CTS, I strongly encourage all of you to advocate for and educate your local communities and patients on the clear benefits of vaccination and *crush* the rumors against vaccine safety. This is vital to our global survival. COVID-19 is not gone until it is controlled across the planet. The FDA has just announced full approval of the Pfizer/BioNTech COVID-19 vaccine and hopefully this will encourage more people to get vaccinated and allow institutions to properly implement vaccination policies.

I am very happy to inform you that Jason Seidler, our new Executive Director has gotten off to a a stellar start in leading CTS business operations. We have a strong line-up of speakers and topics for the ongoing CTS educational webinar series, including the upcoming CTD-ILD overview. We are also working on another COVID-19 summit in the near future

The education planning committee is working on our annual northern California CME conference, to be held on **March 11-13, 2022 in Monterey**. The meeting is planned for in-person, but we are closely monitoring the COVID-19 situation. The agenda will focus on lessons learned from COVID-19 acute respiratory failure and ICU management, post COVID related issues, advances in lung cancer diagnostics and therapeutics, sleep disorders, and climate change. The meeting will also have a *special session for trainees and junior faculty* on career planning and burn-out, a poster session, and *a women's forum addressing* "Family Matters: Challenges and Lessons Learned". New for 2022, CTS will host a CME educational program on advances in interventional pulmonology, which is planned for Sunday, March 13th right after the annual conference. We look forward to seeing you in person (hopefully)!.

Keep safe and be gentle with yourself, as we continue to care for our community in these trying times.

Sincerely,

Vipul V. Jain, MD, MS
UCSF Fresno

EDITOR'S NOTE

***The best win is a friendship (*Paul Quinton, PhD).**

One of CTS' many strengths is its collaborative network, which brings together community and academic clinicians as well as researchers and educators to address pressing issues in real-time and provide resources and information needed to rapidly implement solutions within local communities. As the articles in this month's issue highlight, the CTS community is a source of not only professional expertise, but also camaraderie and friendship that enable all of us to continually provide the best possible care for our patients.

TABLE OF CONTENTS

California State of ICUs During Surge (January-February 2021): A Role for the ATS Chapters

Commentary

Asha V. Devereaux, MD, MPH,[1] Dennis Amundson, DO, MS,[2] Christian Sandrock, MD, MPH[3]

[1]Sharp Coronado, Pulmonary Medicine, Coronado, CA, (ORCID ID:0000-0003-4175-0820)

[2]Scripps Mercy Hospital, Critical Care Division, San Diego, CA

[3]University of California, Davis, Critical Care Division, Davis, CA

The authors are without conflicts of interest.

Abstract: We read with great interest the work published by A. Cypro et. al. in February's issue of the ATS Scholar regarding the excellent international critical care training for healthcare workers instituted by the ATS during April to November 2020.[1] The authors are to be commended for their educational platform. However, what do the educators and experts do when practicing in an era of uncertainty in the midst of COVID-19 Surge? How best do we share resources and knowledge to maintain standards of care in a region in order to avoid crisis situations? How do we reassure each other? We describe the rapid assembly of clinicians in California's Intensive Care Units (ICUs) by the California Thoracic Society.

According to the Johns Hopkins Coronavirus Resource Center, from January to March 2021 the United States led the world in number of COVID cases (29,818,529 million) with the state of California leading in number of positive tests and deaths. During our peak surge, between December 2020 to February 2021, we lost nearly 800 Californians/day and our ICUs reached maximum capacity. (Figure 1) In early January, Los Angeles County, which serves a population of 10.04 million people, only had 54 adult Intensive Care Unit (ICU) beds available. (Figure 2) Oxygen supplies were running low, sterile water for humidification of High Flow Nasal Cannula (HFNC) was depleted, re-ordering for high HFNC tubing was on allocation, and the state needed to rapidly deliver ventilators to hospitals nearing crisis. During this period, there were 5 Alternate Care Sites supporting COVID-19 overflow patients, and contract staff were hired by the state to augment hospitals and nursing homes, due to staff contracting COVID-19. The state utilized many resources in order to prevent the onset of Crisis Care, where difficult scarce resource allocation decisions would be required. It was in this setting that the authors realized that the microcosm of the intensive care unit required broader situational awareness and information sharing in order to meet the medical, technical, intellectual, and resource limitations that the COVID-19 surge created.

Given the global surges of COVID-19, notably in India, Indonesia, and Brazil, we feel it is imperative to share the unique experience of the California Thoracic Society (CTS) in bridging the state's intensive care unit clinicians with the public health disaster infrastructure in order to share, discuss, and trouble-shoot unprecedented scenarios, such as the oxygen shortages experienced.

Methods:

The CTS, a chapter of the American Thoracic Society, has a statewide reach of 612 members and institutional memberships from the following medical systems: UCSF, UCLA, UCLA-Harbor, Stanford, UCSD, Loma Linda, UC Davis, and UCSF-Fresno. The board approved the weekly conferences, which were initiated by email notification with a Zoom link by the CTS administrator. Meetings began on Friday, 1/8/2021 at 5:15pm Pacific. This time was selected to capture post-rounds attendance. The goals of the sessions were to address clinical aspects of ICU care that were still in areas of uncertainty during a rapidly evolving

scientific and enhanced surge period. The meetings began with updates of the current regional ICU capacity followed by an informal query of attendants regarding the status of their ICUs and what concerns/obstacles they were facing. During the second half of the meeting, experts were invited from within as well as outside of California to address pre-selected topics, which were often formulated 3-5 days prior to the conference due to the rapid evolution of information concerning supplies, staff, capacity, and clinical strategies.

Topics Addressed:

Strategic National Stockpile (SNS) Ventilators and Oxygen Systems

Incident Command System and how to request from Medical Health Operational Area Coordination (MHOAC) to state

State response for vents and oxygen

HFNC-troubleshooting shortages.

ECMO Consortium of Southern California

Early Cannulation, Transfers, and Extracorporeal Life Support Organization (ELSO) Guidelines
Avoiding ECMO Crisis

Therapeutic Controversies: Anticoagulation in COVID19

Ventilator Issues and Strategies in overwhelmed Surge

Compassionate Extubation
Ethics and Crisis Care

Bronchoscopy and Aerosol Generating Procedures/Equipment

COVID-19 Genetic Variants: Emerging Implications in Clinical Practice and Public Health

Covid-19 Vaccines: Efficacy, Barriers, and the Impact of Variant Strains

Monoclonal antibodies in the Treatment of COVID-19

After-Action Debrief and ICU Staff Wellness

Results:

Attendance ranged from 40-80 participants/session, often extending beyond the 90 minutes originally allotted. Attendance, although primarily intensivists, also included respiratory therapists, out-patient pulmonologists, hospitalists, advanced care practitioners, pediatric intensivists, and interventional pulmonologists. Interactive video question and answers throughout the Zoom meetings resulted in a conversational approach and open sharing of challenging situations in the ICU. Nearly every academic and major health system, as well as many smaller hospital ICUs in California, participated. Speakers were experts from within California, but one expert from outside of the state was always invited to provide balance and perspective. Due to demand, recordings of the sessions were formulated after the initial meetings and can be found at: https://calthoracic.org/cts-friday-night-zoom-meeting-recordings/

Feedback from the sessions was uniformly positive, with experts often remarking that it became a weekly highlight where new information would be discussed. As a result of the sessions, academic centers were able to rapidly identify gaps and share protocols in real-time. For example, following the Therapeutic Anticoagulation session, UCSF's Pulmonary Chair and CTS Past-President, Dr. Lorri Leard, distributed their newly created anticoagulation protocol with attendees. Oxygen conservation ideas were discussed openly in order to preserve this scarce resource and ways to substitute humidification for HFNC were devised when sterile water supplies were depleted. These conversations permitted elevation of the standards of care throughout the state of California.

Conclusion: The ATS chapters are uniquely positioned to address informational gaps during chaotic events, such as the COVID-19 surge or other disasters. Rapid coordination amongst providers facing a large number of critically ill patients can help seasoned, expert clinicians to successfully prevent entering crisis situations by sharing solutions when faced with deficient supplies, changing therapeutics, and uncertainty in science. Until healthcare coalitions devise a method for connecting ICU clinicians for situational awareness, it is advised that the ATS chapters harness their current relationships to support each other during

Acknowledgements: The authors wish to thank Vickie Parshall, Dave Eubanks, and Phil Porte and the CTS board of directors for their support in facilitating the weekly meetings.

References: Alexander Cypro, W. Cameron McGuire, Mark Rolfsen, et. al. An International Virtual COVID-19 Critical Care Training Forum for Healthcare Workers Published February 24, 2021 as 10.34197/ats-scholar.2020-0154IN

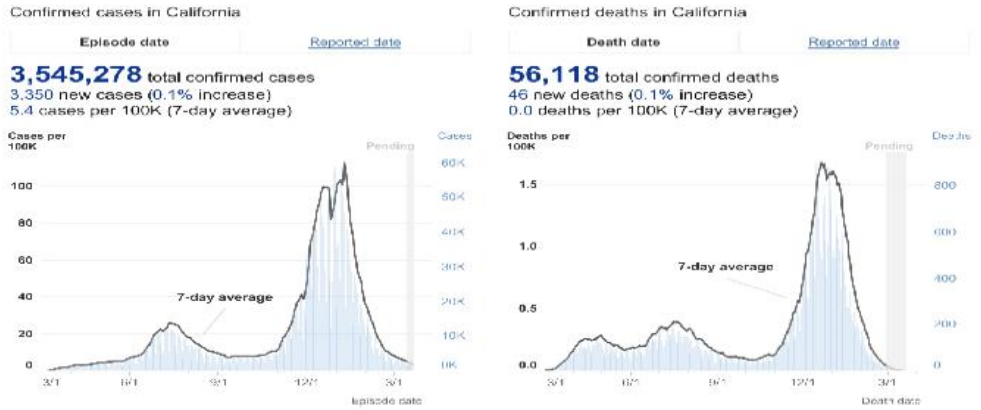
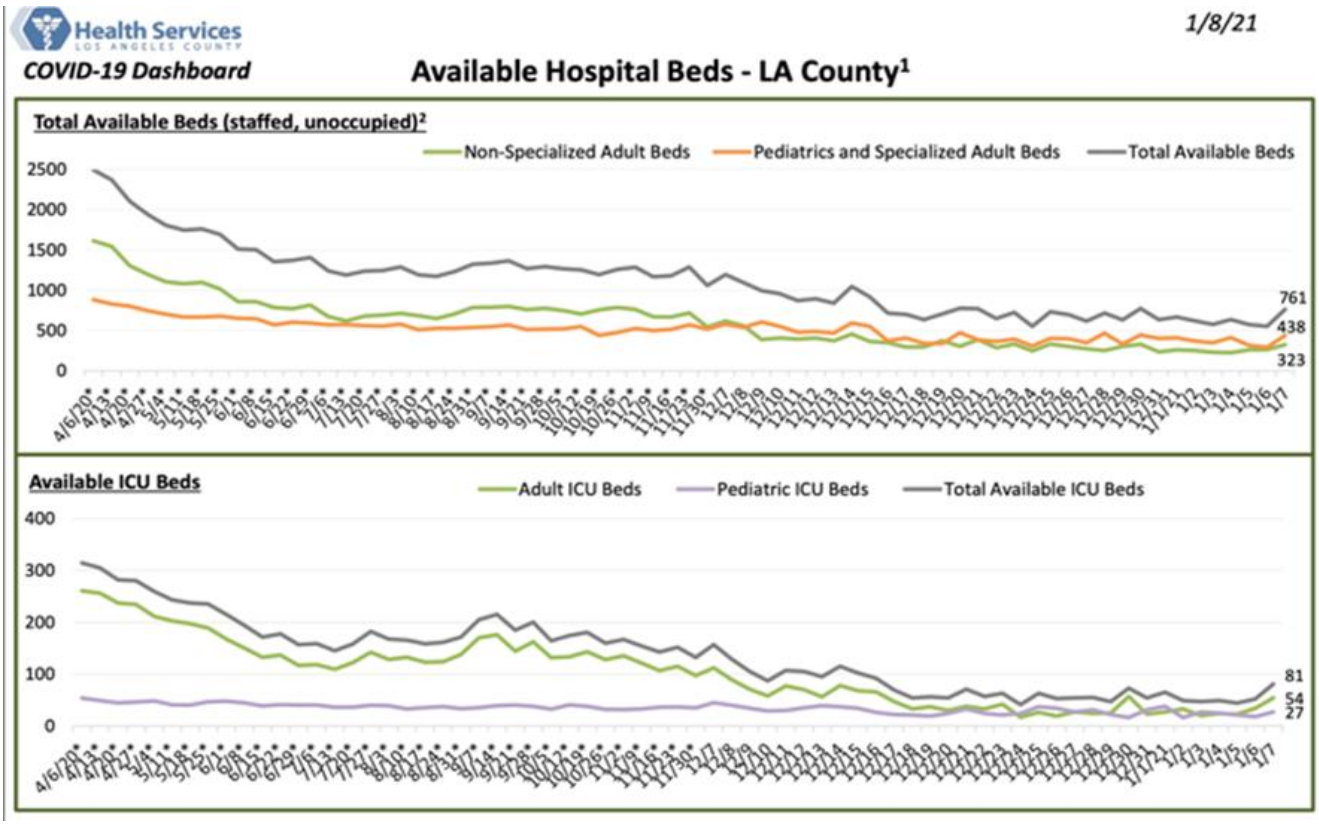


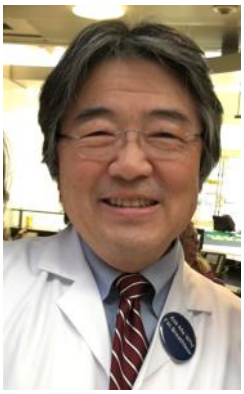
Figure 1: From https://covid19.ca.gov/state-dashboard/ showing the peak activity of surge in California of



cases and deaths. Access Date: 3/21/21

Empathy is Never an Occupational Hazard: California's Sam Louie Selected as ATS' 2021 Outstanding Clinician of the Year

By Laren Tan, MD Past CTS President 2020-2021 - Loma Linda University Health



"Call me Sam, like Sam-I-am." These are the words that come to mind when I reflect on when I first met Sam. While Sam is formally known as Dr. Samuel Louie, his patients and colleagues know him more affectionately as Sam. At the ATS 2021 International Conference, Sam received ATS's Outstanding Clinician Award. This national award is presented to an individual who embodies excellence in the clinical practice of lung health medicine and is an exemplary community or academic clinician. To be considered for this award, the nominee must spend the majority of their time in the clinical care of patients with lung disease and have have made substantial contributions to the American Thoracic Society and American Lung Association on a local or national level.

Sam received his M.D. from the University of California, San Francisco, in 1980. Following his residency in Internal Medicine at the Wadsworth VA Medical Center and UCLA, he completed a Pulmonary and Critical Care Medicine Fellowship at UC Davis, where he joined the Faculty in 1986 and retired in 2020. He currently serves as Professor Emeritus at the University of California, Davis School of Medicine.

While at UC Davis, Sam mentored a generation of clinicians and academicians (like me and many others who have served as CTS officers) with the precept that *empathy is never an occupational hazard*. He founded the UC Davis Asthma Network (UCAN) in 1996 and the Reversible Obstructive Airways Disease (ROAD) program in 2011, an innovative approach promoting patient-centric care that utilizes expert registered respiratory therapists. He has dedicated his life to empowering patients and is a lifelong advocate in always putting the patient first.

The California Thoracic Society is proud to have nominated Dr. Sam Louie, and for Sam to be the recipient of the ATS 2021 Outstanding Clinician of the Year. As one of Sam's patient's writes below: "Sam's warmth as a human being transcends the nature of the patient doctor relationship. " HIs empathy and intellect have lit a light within many of us, his colleagues and mentees. Sam's award attests that our state is filled with compassionate, courageous, dedicated respiratory, critical care, and sleep providers who embody our profession's highest ideals.

Sam Louie Patient Letter - From: a patient of Sam Louie's (Permission was granted to be submitted to ATS for Sam's award)

Dr. Samuel Louie, who wants to be known as Sam to his patients, new and old, has been my doctor for twelve years. I first saw him as a result of a referral from Dr. Allen to help control part of a very severe and chronic lung issue. What I remember most of that first meeting was the relaxed nature in which he entered the exam room and began to describe the role of biologics to my wife and me. The presentation was very clinical and at the same time peppered with jokes and humanness. Immediately, we were both at ease. I continued to see him and his staff twice a month for ten years to receive injections that began to get my chronic issue under control.

During this time, I watched Sam's approach to patient care. At each appointment he would be face to face with me questioning how I was doing and what was working and what was not. He did not rely on case notes during these appointments, nor was he buried in a computer screen. From the moment he entered the room, he was observing and assessing how I looked. His approach was always the same regardless of how tired he was from critical care service or being under the weather himself. He made you feel that you were the most important person in the clinic, a feeling that I am sure all his other patients felt. From a clinical perspective, I was amazed at his ability to describe very complex processes in very simple terms so that you could relate. Further, I also liked and appreciated his thinking "out-side -the-box" when searching for reasons for things that were happening clinically.

Through the years, Sam has been incredibly available and supportive to me when I have been trying to make decisions about emergency room visits or hospitalizations. Because I live out of the Sacramento area, these are very stressful times and his availability has been crucial to their outcomes.

Sam's warmth as a human being transcends the nature of the patient doctor relationship. He immediately engenders trust in the medical world. There are not enough words to describe the caring and respect I have for Sam as a doctor and a person.

2021 California Thoracic Society

Disaster Guidance: 10 Tips for Staying Healthy During Wildfires

Fire season challenges all Californians: clinicians, patients, families, and the public. The 2021 drought adds considerable complexity on many fronts, **California | Drought.gov**. We hope to support the needs of all Californians with this wildfire resource guide. Important resources include local Area Air Quality Management Districts below.

California Map for Local Air District https://ww3.arb.ca.gov/capcoa/dismap.htm

South Coast Air Quality Management District https://www.aqmd.gov/

South Coast AQMD Mobile App http://www.aqmd.gov/mobileapp

Bay Area Air Quality Management District https://www.baaqmd.gov/

San Joaquin Valley Air Pollution Control District https://www.valleyair.org/Home.htm

Sacramento Air Quality Management District http://www.airquality.org/

San Diego Air Pollution Control District https://www.sdapcd.org/

https://www.airnow.gov provides a searchable air quality index (AQI) including fine particulate matter (PM2.5), ozone levels, air quality forecast, and resources.

Wildfire smoke can irritate your eyes, nose, throat, and lungs. It can make you cough and wheeze, and it can make it hard to breathe. Inhaling smoke can be especially dangerous for anyone with a lung disorder. Persons at risk include those with lung or heart disease, pregnant women, older individuals, and young children—all of whom need to take special care and consider consulting with their doctor about specific precautions. Below are some general considerations during worsening air quality or increase in smoke and/or fires.

1. Stay indoors with windows and doors closed.
2. Reduce physical activity.
3. Reduce other sources of indoor air pollution (smoking cigarettes, vaping, wood-burning stove, frying meat). Do not vacuum anywhere in the house.
4. Use central air conditioner or filters. A home's heater set to the fan mode may be able to filter out some of the particles by "recirculating" the indoor air through the filter. Consult with a heating ventilation and air conditioning (HVAC) specialist to find out if your home heating system can handle a MERV (minimum efficiency reporting value) 13 filter to filter out wildfire smoke particles.
5. Create one or more clean rooms at home: Use an interior room with fewer doors and windows and run an air conditioner and portable HEPA air cleaner, if possible. Check that the portable HEPA air cleaner that you purchase has the appropriate clean air delivery rate (CADR) for the size of the room you want to filter.
6. Note: do not use air cleaners that produce ozone such as "super oxygenators" or deionizers.

7. When traveling in a vehicle, keep the windows closed and run the air conditioner. Set air to "re-circulate" to reduce smoke.
8. An N95 mask can help reduce inhalation of fine particulate matter (PM2.5), especially if it covers your nose and mouth and fits tightly on your face. None of these masks protect against hazardous gas inhalation. The following video demonstrates how to properly put on an N95 mask. https://m.youtube.com/watch?v=0d_RaKdqeck
9. Consider evacuation to areas with lower AQI for persons with respiratory health problems (especially with asthma, COPD/emphysema, and pulmonary fibrosis.)
10. Patients with asthma or COPD should ensure that they are taking their maintenance ("controller") medications or discuss an appropriate regimen with their physician.

References/Resources

- https://www.airnow.gov/fires/
- https://www.cdc.gov/disasters/wildfires/smoke.html
- California Department of Public Health Emergency Preparedness Office https://www.cdph.ca.gov/Programs/EPO/Pages/Program-Landing1.aspx
- https://www.cdph.ca.gov/Programs/EPO/Pages/Wildfire%20Pages/Wildfires--.aspx
- http://www.aqmd.gov/home/air-quality/air-alerts
- http://wildfirerecovery.caloes.ca.gov/general-info/consumer-awareness

CTS thanks John Balmes MD for updating this resource.

ATS/California Thoracic Society (CTS) Members:

- Lorriana Leard, MD (lorriana.leard@ucsf.edu), University of California, San Francisco, CTS Education Committee
- Angela Wang, MD (a1wang@icloud.com), Scripps Clinic, Chair, ATS Council of Chapter Representatives and Past President of CTS
- Lekshmi Santhosh, MD (lekshmi.santhosh@ucsf.edu), University of California, San Francisco, CTS Education Committee
- John Balmes, MD (john.balmes@ucsf.edu), University of California, San Francisco, Past President of CTS

Expansion of SB 850: Community College Districts and the Baccalaureate Degree Pilot Program

By Krystal Craddock MSRC, RRT, RRT-NPS, AE-C, CCM

In September of 2014, Governor Jerry Brown signed Senate Bill (SB) 850, allowing participating community college districts to meet specified requirements to offer baccalaureate degree programs not offered by the California State University or the University of California. These degree programs would also be aimed in subject areas with unmet workforce needs, like Respiratory Care. This pilot went into effect on January 1, 2015, with the sunset date of 2026. SB 850 allowed two community colleges, Modesto and Skyline, to offer baccalaureate degrees in respiratory care. Both programs are now starting their sixth cohort and are now accredited by the Commission on Accreditation for Respiratory Care.

Assembly Bill (AB) 927, supports the continuation to this access for RT's to obtain their baccalaureate degree in respiratory care at an affordable rate. AB 927 was introduced earlier this year and extends the operation of these baccalaureate degree programs indefinitely. This bill also expands programs from the existing 15 community colleges to 30 baccalaureate degree programs. AB 927 is currently with the Senate Appropriations Committee set to meet in August. Respiratory care, once considered a "tech" field, has flourished into a growing profession. Both the American Association for Respiratory Care and the CSRC are encouraging of eventually requiring a baccalaureate degree as a minimum for entry into the field. Improving access to these continuation degree programs, will support the AARC and CSRC's efforts. SB 850 and AB 927 provides access to education that can improve higher level of care and critical thinking, which extends into excellent patient care and improved interdisciplinary collaboration.

For more information on SB 850: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201320140SB850

AB 927: https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB927

MEET MICHELLE CAO, DO

CTS'S PRESIDENT-ELECT

"I am a clinical associate professor in the Division of Pulmonary, Allergy, Critical Care Medicine and the Division of Sleep Medicine at Stanford University. I am originally from southern California and settled in northern California after completing my Sleep Medicine fellowship at Stanford. Reflecting on my time and involvement with CTS, I recall first attending the annual educational conference in Monterey, CA several years ago. In 2017, I was invited to speak at the southern California educational conference where I met Drs. Angela Wang and Shazia Jamil, who took me under their wings and encouraged me to get involved with the organization. Dr. Wang and Dr. Jamil are now trusted friends and colleagues, and I have since formed invaluable relationships with many others throughout California. I am currently the co-chair of education and also president elect for 2022-2023. It is a true honor to serve in these leadership roles. Looking back, I would never have thought that I would be here today! This also applies to being a mother of three young boys!

CTS is a great organization for trainees and junior faculty to find mentors and sponsors, and for clinicians and researchers to share the latest advances in pulmonary, critical care, and sleep medicine. It is a high caliber venue for professionals to come together to share academic achievements. I would love to see many more trainees and junior faculty get involved with CTS, and this is certainly one of my missions as future president."

SWJPCC Update

Below are our submissions for last month, July 2021. Budhiraja's manuscript from the Brigham in Boston along with an earlier publication by Quan in the SWJPCC (The Association Between Obstructive Sleep Apnea Defined by 3 Percent Oxygen Desaturation or Arousal Definition and Self-Reported Cardiovascular Disease in the Sleep Heart Health Study) are important because they suggest that the Medicare and most insurance company guideline of 4% desaturation for the diagnosis a hypopnea is too strict. This position is supported by the American Sleep Association because of this research. Also, Scheffer's paper suggests that using methylene blue in 32 patients with congenital heart disease who received methylene blue as treatment for hypotension compared to 50 controls may be beneficial.

SWJPCC Journal - Volume 23 Issue 1

Volume 23, Issue 1							
Title (Click on title to open the manuscript)	**Journal Section**	**First Author**	**Year**	**Vol**	**Issue**	**Pages**	**Date Posted**
Long-term All-Cause Mortality Risk in Obstructive Sleep Apnea Using	Sleep	Budhiraja R	2021	23	1	23-35	7/12/21
Hypopneas Defined by a ≥3 Percent Oxygen Desaturation or Arousal							
A Case and Brief Review of Bilious Ascites and Abdominal Compartment	Critical Care	Martin MA	2021	23	1	18-22	7/11/21
Syndrome from Pancreatitis-Induced Post-Roux-En-Y Gastric Remnant							
Leak							
Methylene Blue Treatment of Pediatric Patients in the Cardiovascular	Critical Care	Scheffer AL	2021	23	1	8-17	7/3/21
Intensive Care Unit							
Medical Image of the Month: Hepatic Abscess Secondary to Diverticulitis	Imaging	Randhawa R	2021	23	1	5-7	7/2/21
Resulting in Sepsis							
July 2021 Critical Care Case of the Month: When a Chronic Disease	Critical Care	Calhoun K	2021	23	1	1-4	7/1/21
Becomes Acute							