

Stanford



Michelle Thi Cao

Clinical Professor, Medicine - Pulmonary, Allergy & Critical Care Medicine

CLINICAL OFFICES

- **Chest Clinic**

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- **Emeryville Chest Clinic**

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Bio

BIO

Dr. Michelle Cao is board certified in pulmonary medicine, critical care medicine, and sleep medicine. Dr. Cao's clinical expertise are in the subspecialties of home mechanical ventilation, noninvasive ventilation, and complex pulmonary and sleep related respiratory disorders including obstructive and central sleep apnea syndromes.

CLINICAL FOCUS

- Home Mechanical Ventilation
- Pulmonology and Sleep Disorders
- Pulmonary and sleep related breathing disorders in neuromuscular disease
- Sleep Apnea Syndromes
- Pulmonary Disease

ACADEMIC APPOINTMENTS

- Clinical Professor, Medicine - Pulmonary, Allergy & Critical Care Medicine

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Chair, American Academy of Sleep Medicine; Sleep Technologist & Respiratory Therapist Education Committee (2022 - present)
- Vice Chair, American College of Chest Physicians - Scientific Presentations and Awards Committee (2021 - present)
- President, California Thoracic Society (2022 - 2023)
- Chair, American College of Chest Physicians - Home Mechanical Ventilation and Neuromuscular Disease NetWork (2019 - 2021)
- Member, American Thoracic Society (2008 - present)

- Fellow, American Academy of Sleep Medicine (2007 - present)
- Fellow, American College of Chest Physicians (2004 - present)

PROFESSIONAL EDUCATION

- Fellowship: Stanford University CAPS Postdoctoral Fellowship (2008) CA
- Fellowship: Harbor UCLA Medical Center (2007) CA
- Residency: Loma Linda University - School of Medicine (2003) CA
- Medical Education: Western University of Health Sciences College of Osteopathic Medicine of the Pacific (2000) CA
- Board Certification: Pulmonary Disease, American Board of Internal Medicine (2006)
- Board Certification: Critical Care Medicine, American Board of Internal Medicine (2007)
- Board Certification: Sleep Medicine, American Board of Internal Medicine (2009)

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Positive Airway Pressure devices for central sleep apnea

Teaching

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Sleep Medicine (Fellowship Program)

Publications

PUBLICATIONS

- **International consensus statement on obstructive sleep apnea.** *International forum of allergy & rhinology*
Chang, J. L., Goldberg, A. N., Alt, J. A., Ashbrook, L., Auckley, D., Ayappa, I., Bakhtiar, H., Barrera, J. E., Bartley, B. L., Billings, M. E., Boon, M. S., Bosschieter, P., Braverman, et al
2022
- **Chronic Opioid Use and Sleep Disorders.** *Sleep medicine clinics*
Javaheri, S., Cao, M.
2022; 17 (3): 433-444
- **Obstructive sleep apnea: personalizing CPAP alternative therapies to individual physiology.** *Expert review of respiratory medicine*
Nokes, B., Cooper, J., Cao, M.
2022
- **The Effect of Obstructive Sleep Apnea Treatment and Severity on Choroidal Thickness in Patients With Central Serous Chorioretinopathy.** *Journal of vitreoretinal diseases*
Azad, A. D., Davila, J. R., Rayess, N., Cao, M., Mruthyunjaya, P., Pan, C. K.
2022; 6 (1): 22-30
- **A deep learning-based system for survival benefit prediction of tyrosine kinase inhibitors and immune checkpoint inhibitors in stage IV non-small cell lung cancer patients: A multicenter, prognostic study** *eClinicalMedicine*
Deng, K., Wang, L., Liu, Y., Li, X., Hou, Q., Cao, M., Ng, N. N., Wang, H., Chen, H., Yeom, K. W., Zhao, M., Wu, N., Gao, et al
2022; 51: 1-14
- **The Effect of Obstructive Sleep Apnea Treatment and Severity on Choroidal Thickness in Patients With Central Serous Chorioretinopathy** *JOURNAL OF VITREORETINAL DISEASES*
Azad, A. D., Davila, J. R., Rayess, N., Cao, M., Mruthyunjaya, P., Pan, C. K.
2022; 6 (1): 22-30

- **Obstructive sleep apnea and severe COVID-19 infection: is there a plausible link?** *Journal of clinical sleep medicine : JCSM : official publication of the American Academy of Sleep Medicine*
Sahni, A., Cao, M.
2021
- **Acute on Chronic Neuromuscular Respiratory Failure in the Intensive Care Unit: Optimization of Triage, Ventilation Modes, and Extubation** *CUREUS*
Murray, N. M., Reimer, R. J., Cao, M.
2021; 13 (7)
- **Acute on Chronic Neuromuscular Respiratory Failure in the Intensive Care Unit: Optimization of Triage, Ventilation Modes, and Extubation.** *Cureus*
Murray, N. M., Reimer, R. J., Cao, M.
2021; 13 (7): e16297
- **Reply to Comment on: The Effect of Obstructive Sleep Apnea on Absolute Risk of Central Serous Chorioretinopathy** *AMERICAN JOURNAL OF OPHTHALMOLOGY*
Pan, C. K., Vail, D., Bhattacharya, J., Cao, M., Mruthyunjaya, P.
2021; 226: 271-272
- **Reply to Comment on: The Effect of Obstructive Sleep Apnea on Absolute Risk of Central Serous Chorioretinopathy.** *American journal of ophthalmology*
Pan, C. K., Vail, D., Bhattacharya, J., Cao, M., Mruthyunjaya, P.
2021
- **Noninvasive Ventilator Devices and Modes.** *Sleep medicine clinics*
Singh, G., Cao, M.
2020; 15 (4): 545-55
- **Consensus-Based Care Recommendations for Pulmonologists Treating Adults with Myotonic Dystrophy Type 1.** *Respiration; international review of thoracic diseases*
Boentert, M. n., Cao, M. n., Mass, D. n., De Mattia, E. n., Falcier, E. n., Goncalves, M. n., Holland, V. n., Katz, S. L., Orlikowski, D. n., Sannicolò, G. n., Wijkstra, P. n., Hellerstein, L. n., Sansone, et al
2020: 1-9
- **Sleep medicine exposure offered by United States residency training programs.** *Journal of clinical sleep medicine : JCSM : official publication of the American Academy of Sleep Medicine*
Sullivan, S. S., Cao, M. T.
2020
- **The Effect of Obstructive Sleep Apnea on Absolute Risk of Central Serous Chorioretinopathy.** *American journal of ophthalmology*
Pan, C. K., Vail, D. n., Bhattacharya, J. n., Cao, M. n., Mruthyunjaya, P. n.
2020
- **NEUROMUSCULAR RESPIRATORY FAILURE IN THE ICU: AN "UNWEANABLE" PATIENT AND A NOVEL TIERED PROTOCOL**
Murray, N., Reimer, R., Cao, M.
LIPPINCOTT WILLIAMS & WILKINS.2020
- **Chronic opioid use on sleep and respiration: scratching the surface.** *Sleep medicine*
Cao, M. n.
2019
- **Effects of Chronic Opioid Use on Sleep and Wake** *SLEEP MEDICINE CLINICS*
Cao, M., Javaheri, S.
2018; 13 (2): 271-+
- **Survey of Sleep Education Offered by US Pulmonary and Critical Care Fellowship Training Programs**
Sullivan, S., Cao, M.
ELSEVIER SCIENCE BV.2017: 554A
- **Sleep and Health: Medical Students' Perspectives and Lessons Learned** *ACADEMIC PSYCHIATRY*
Sullivan, S. S., Cao, M. T.
2017; 41 (5): 679-81

- **Factors Influencing Noninvasive Ventilation Initiation in Amyotrophic Lateral Sclerosis**
Doddamreddy, P., Singh, G., Schultz, B., Cao, M.
ELSEVIER SCIENCE BV.2017: 187A
- **Continuous positive airway pressure therapy in obstructive sleep apnea: benefits and alternatives** *EXPERT REVIEW OF RESPIRATORY MEDICINE*
Cao, M. T., Sternbach, J. M., Guilleminault, C.
2017; 11 (4): 259-272
- **SURVEY OF SLEEP EDUCATION OFFERED BY US NEUROLOGY TRAINING PROGRAMS**
Cao, M., Sullivan, S.
OXFORD UNIV PRESS INC.2017: A440
- **SURVEY OF SLEEP EDUCATION OFFERED BY US PSYCHIATRY SUBSPECIALTY FELLOWSHIP PROGRAMS**
Sullivan, S., Lopez, J., Cao, M.
OXFORD UNIV PRESS INC.2017: A440-A441
- **The hypocretin/orexin system in sleep disorders: preclinical insights and clinical progress.** *Nature and science of sleep*
Chow, M., Cao, M.
2016; 8: 81-86
- **Opioids, Sedatives, and Sleep Hypoventilation** *SLEEP MEDICINE CLINICS*
Arora, N., Cao, M., Javaheri, S.
2014; 9 (3): 391-+
- **A Novel Adaptive Servoventilation (ASVAuto) for the Treatment of Central Sleep Apnea Associated with Chronic Use of Opioids.** *Journal of clinical sleep medicine*
Cao, M., Cardell, C., Willes, L., Mendoza, J., Benjafield, A., Kushida, C.
2014; 10 (8): 855-861
- **Central Sleep Apnea: Effects on Stroke Volume in Heart Failure** *AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE*
Cao, M., Guilleminault, C., Lin, C.
2013; 187 (4): 340-341
- **Sleep-Disordered Breathing, Heart Failure, and Phrenic Nerve Stimulation** *CHEST*
Cao, M., Guilleminault, C.
2012; 142 (4): 821-823
- **Acute and Chronic Sleep Loss: Implications on Age-Related Neurocognitive Impairment** *SLEEP*
Cao, M., Guilleminault, C.
2012; 35 (7): 901-902
- **NEUROHORMONES AND SLEEP** *VITAMINS AND HORMONES: SLEEP HORMONES, VOL 89*
Frenette, E., Lui, A., Cao, M.
2012; 89: 1-17
- **Hypocretin Antagonists in Insomnia Treatment and Beyond** *CURRENT PHARMACEUTICAL DESIGN*
Ruoff, C., Cao, M., Guilleminault, C.
2011; 17 (15): 1476-1482
- **Hypocretin and Its Emerging Role as a Target for Treatment of Sleep Disorders** *CURRENT NEUROLOGY AND NEUROSCIENCE REPORTS*
Cao, M., Guilleminault, C.
2011; 11 (2): 227-234
- **Advances in the pharmacological approach to sleep disorders.** *Current pharmaceutical design*
Cao, M.
2011; 17 (15): 1416-1417
- **Obstructive Sleep Apnea and Chronic Opioid Use** *LUNG*
Guilleminault, C., Cao, M., Yue, H. J., Chawla, P.
2010; 188 (6): 459-468

- **Families with sleepwalking** *SLEEP MEDICINE*
Cao, M., Guilleminault, C.
2010; 11 (7): 726-734
- **Advances in Narcolepsy** *MEDICAL CLINICS OF NORTH AMERICA*
Cao, M.
2010; 94 (3): 541-?
- **Pediatric sleep disorders: How can sleep-medicine make a difference?** *SLEEP MEDICINE REVIEWS*
Cao, M., Guilleminault, C.
2009; 13 (2): 107-110
- **Sleep and breathing: The impact of mechanical ventilation on the quality of sleep** *CRITICAL CARE MEDICINE*
Cao, M., Sarinas, P. S.
2008; 36 (6): 1960-1962
- **Sleep difficulties and behavioral outcomes in children** *ARCHIVES OF PEDIATRICS & ADOLESCENT MEDICINE*
Cao, M., Guilleminault, C.
2008; 162 (4): 385-389
- **Maxillomandibular advancement surgery for obstructive sleep apnea** *Minerva Pneumologica*
Cao M, Li KK, Guilleminault C
2008; 47: 203-12
- **The dual-wave bolus feature in continuous subcutaneous insulin infusion pumps controls prolonged post-prandial hyperglycaemia better than standard bolus in Type 1 diabetes** *DIABETES NUTRITION & METABOLISM*
Lee, S. W., Cao, M., Sajid, S., Hayes, M., Choi, L., Rother, C., de Leon, R.
2004; 17 (4): 211-216